Product Catalog

Variable Refrigerant Flow (VRF)
Air Source Heat Pump and Heat Recovery Outdoor Units
4TVH*/4TVR*



February 2015

VRF-PRC008B-EN

Introduction

Trane® VRF variable refrigerant systems are efficient, effective, reliable heating and cooling solutions you can trust. When VRF is the right solution for your application, Trane® will help you ensure it's the best solution. VRF is well suited for historic buildings without existing ductwork, as well as schools and mid-rise office buildings with multiple interior spaces and diverse occupancy rates.

Trane® VRF systems are designed for exceptional energy efficiency, offering industry leading performance up to 33 IEER and 32 SCHE. Trane® VRF utilizes inverter compressors (some model feature dual compressors) with vapor injection for improved performance and comfort.

Systems are available for both heat pump and simultaneous heating and cooling operation. Both feature individual zone control to provide individual occupant comfort. The simultaneous heating and cooling models offer the ability to heat and cool adjacent zones, intelligently exchanging energy between them through strategically located mode control units.

Indoor units are available in a wide variety of configurations and capacities, allowing architects the flexibility to satisfy almost any design requirement.

Trane® offers a complete line-up of controls to complete your VRF installation. These range from easy to use individual zone controls, to centralized systems for building monitoring and control, as well as optional BACnet® connectivity for centralized Trane® Tracer™ integration.

Best of all, your Trane® VRF™ system is supported by the Trane® nationwide network of sales and service offices.

Copyright

This document and the information in it are the property of Trane, and may not be used or reproduced in whole or in part without written permission. Trane reserves the right to revise this publication at any time, and to make changes to its content without obligation to notify any person of such revision or change.

Trademarks

All trademarks referenced in this document are the trademarks of their respective owners.

Revision History

VRF-PRC008B-EN (17 February 2015)

- AHRI-1230 ratings updated and now include larger capacity systems previously not covered.
- Low ambient heating range expanded from -4°F to -13°F.

Table of Contents

System Features

- Individual modules are available as standard heat pump or simultaneous heating and cooling (heat recovery) configuration; units can be combined as double or triple modules for larger capacity requirements.
- 3rd generation compressor technology features all inverter compressors for superior efficiency and reliability
- Asymmetric scroll is designed to minimize frictional loss
- Dual inverter compressors (available in many models) are designed to equally share load for higher reliability
- Improved vapor injection system increases refrigerant flow rate up to 20% for superior heating performance
- Intercooler uses a plate heat exchanger for improved heating and cooling efficiency
- 8,400 RPM (maximum speed) compressor assures quick start cooling and heating performance
- Auto oil balancing eliminates the need for an oil balancing pipe
- Compressor inverter drives are liquid cooled for improved reliability
- Longer pipe lengths are the result of large oil storage capacity and low oil circulation rate
- Total harmonic distortion is reduced through adaptive sine wave control
- Refrigerant pump down and pump out facilitates maintenance and repair
- Automatic refrigerant balancing between indoor units optimize refrigerant distribution for better comfort and performance
- Optional quiet operation mode for reduced sound levels at night
- Auto snow blowing function removes accumulated snow when conditions require it
- Special hydrophilic heat exchanger coating minimizes frost build up on the outdoor coils and facilitates the defrost cycle.
- Anti-corrosion finish provides added protection in harsh environments
- Four and six port mode control units are light and compact. Distributed installation flexibility provides superior performance during simultaneous heating and cooling operation.
- Trane® VRF systems feature self-diagnosis, including system monitoring and error code reporting

Model Number Descriptions

4	T	V	R	0	0	9	6	B	3	0	0	N	B
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Digit 1 — Refrigerant

4 = R-410A

Digit 2 — Brand Name

T = Trane

Digit 3 — System Type

V = Variable Refrigerant Flow

Digit 4 — Functional Type Outdoor Unit

H = Heat Pump, DC Inverter (VRF)
R = Heat Recovery (three pipe), DC Inverter

Digit 5 — Special Application

0 = Standard

Digit 6,7,8 — Nominal Capacity

Important: *Btuh x1,000*

072 = 72,000 Btuh
096 = 96,000 Btuh
120 = 120,000 Btuh
144 = 144,000 Btuh

Digit 9 — Major Development Sequence

B = Second Development Sequence

Digit 10 — Electric Power Supply Characteristics

3 = 208–230/60/3
4 = 460/60/3

Digit 11 — Reserved for Future Use

0 = Not currently used

Digit 12 — Reserved for Future Use

0 = Not currently used

Digit 13 — Region of Sale

N = North America (UL or ETL)

Digit 14 — Minor Design Sequence

B = Second Design Sequence

System Combination Line-up

	Tons	4TVH/R0072B	4TVH/R0096B	4TVH/R0120B	4TVH/R0144B
Single Module	6	1			
	8		1		
	10			1	
	12				1
Double Module	14	1	1		
	16	1		1	
	18	1			1
	20			2	
	22			1	1
	24				2
Triple Module	26	1	1		1
	28	1		1	1
	30	1			2
	32			2	1
	34			1	2
	36				3

Products

Table 1. Application matrix

		Capacity													
		7.5 MBh	9.0 MBh	9.5 MBh	12 MBh	18 MBh	20 MBh	24 MBh	30 MBh	36 MBh	42 MBh	48 MBh	60 MBh	76.8 MBh	96 MBh
Type															
Slim one way cassette		X		X	X										
Four way cassette			X		X	X		X	X	X		X			
Mini four way cassette				X	X	X	X								
Slim duct		X		X	X	X		X	X	X		X			
MSP duct						X		X	X	X		X			
HSP duct										X		X		X	X
Ceiling						X		X							
High Wall		X		X	X	X	X	X							
Convertible AHU								X	X	X	X	X	X		

Controls

Table 2. Controls for VRF Products

Family	Description	Model Number
Zone Controllers	VRF Wireless Remote Control	TVCTRLTRDH00UT
	VRF Simple Wired Remote Control	TVCTRLWR001T
	VRF Wired Remote Control	TVCTRLTWRWD01T
	VRF Duct Signal Receiver & Wire	TVCTRLTRKA10N0
Centralized Control Systems	VRF Central On/Off Control	TVCTRLTCMA202D
	VRF Touch Screen Control	TVCTRLTCMA300T
	VRF Mode Select Switch	TVCTRLTCMC2000
Integrated System Management	VRF System Controller	TVCTRLTIMD00A0
	VRF Enterprise Management Software	TVCTRLTSTP3P00
	VRF Power Meter Interface Mod.	TVCTRLTIMB16A0
Building Management System Gateways	VRF System Controller + BACnet	TVCTRLTIMB17A0
	VRF System Controller + LonTalk™	TVCTRLTIMB18A0
Interface Modules	VRF External Contact Interface Module	TVCTRLTIMB14A0
	VRF Multi Function Control	TVCTRLTC210N00
	VRF MFC Enclosure	TVCTRLTC210BOX
	Required control box for 4TVM air handling unit	4TVCTRLAU001
Sensors	VRF Ext. Room Temp Sensor	TVCTRLTRWTA000
	VRF Motion Sensor Mini 4Way	MOTIONSEN4TVB
Commissioning and Utility Kits	VRF Technician Utilities Tool	TVCTRLTIMC0300
	VRF Auto-Commissioning Tool	TVCTRLTIMC1000

Accessories

Table 3. Accessories for VRF Products

Family	Description	Model Number
Refrigeration Joints	VRF Y-joint <51MBh	4YDK1509B0051A
	VRF Y-joint 51-138MBh	4YDK2512B0138A
	VRF Y-joint 138-160MBh	4YDK2812B0160A
	VRF Y-joint 160-240MBh	4YDK2815B0240A
	VRF Y-joint 240-336MBh	4YDK3419B0336A
	VRF Y-joint 336-468MBh	4YDK4119B0468A
	VRF Y-joint >468MBh	4YDK4422B0999A
	VRF Y-joint HR <80MBh	4YDK1500B0080A
	VRF Y-joint HR 80-240MBh	4YDK2500B0240A
	VRF Y-joint HR 240-468MBh	4YDK3100B0468A
	VRF Y-joint HR >468MBh	4YDK3800B0999A
	VRF T-joint >468MBh	4TDK3800B0999A
	VRF T-joint <468MBh	4TDK3819B0000A
	VRF T-joint HR <468MBh	4TDK3100B0000A
	VRF T-joint HR >468MBh	4TDK4422B0999A
Header Joints	VRF Header Joint 4Units<160MBh	4HJK2512B0159A
	VRF Header Joint 8Units 240MBh	4HJK3115B0241A
	VRF Header Joint 8Units<160MBh	4HJK3819B0998A
EEV Kits (For Floor/Ceiling and Selected High Wall Indoor Units	VRF EEV Kit 1Unit 7-15.5MBh	4EEVEVA24SA000
	VRF EEV Kit 1Unit 17-31MBh	4EEVEVA32SA000
	VRF EEV 1x 7-15.5& 1x 17-31MBh	4EEVXDA24K132A
	VRF EEV Kit 2Unit 7-15.5MBh	4EEVXDA24K200A
	VRF EEV 2x 7-15.5& 1x 17-31MBh	4EEVXDA24K232A
	VRF EEV Kit 2Unit 17-31MBh	4EEVXDA32K200A
	VRF EEV 1x 7-15.5& 2x 17-31MBh	4EEVXDA32K224A
	VRF EEV Kit 3Unit 7-15.5MBh	4EEVXDA24K300A
	VRF EEV Kit 3Unit 17-31MBh	4EEVXDA32K300A
AHU Kits	VRF AHU Kit 24-30MBh	4EEVAKA40K1025
	VRF AHU Kit 48-60MBh	4EEVAKA40K1050
	VRF AHU Kit 72-90MBh	4EEVAKA64K1075
	VRF AHU Kit 96-112MBh	4EEVAKA64K1100

Table 3. Accessories for VRF Products (continued)

Family	Description	Model Number
Condensate Pumps	VRF Drain Pump High Wall and Floor/Ceiling	CONDPUMPAHWB01
	VRF Drain Pump Slim Duct	CONDPUMPXVLB01
	VRF Drain Pump MSP 18/24MBh	CONDPUMPXVMB01
	VRF Drain Pump MSP 30/36MBh	CONDPUMPXVMB02
	VRF Drain Pump MSP48/ HSP3648MBh	CONDPUMPXVDB01
	VRF Drain Pump HSP 76.8/96MBh	CONDPUMPXVHB01
Mode Control Units (for Simultaneous Heating and Cooling Applications)	VRF MCU Kit up to 4 IDU	4MCUCUY4NCE000
	VRF MCU Kit up to 6 IDU	4MCUCUY6NCE000
	VRF MCU Kit 2 IDU 36 MBh +	4MCUCUY2NCE000
Ball Valves	1/2" Ball Valve Flare	BVALVE12FLARE1
	1/4" Ball Valve Flare	BVALVE14FLARE1
	3/8" Ball Valve Flare	BVALVE38FLARE1
	5/8" Ball Valve Flare	BVALVE58FLARE1
Cassette Panels	VRF Cass. Panel Sliding 1Way	TVEPANPC1NUAET
	VRF Cass. Panel Slim 1Way	TVEPANPC1NUSET
	VRF Cass. Panel 4Way	TVEPANPC4NUSET
	VRF Cass. Panel Mini 4Way	TVEPANPC4SUSET
Pressure Differential Module (for high rise applications)	Pressure Diff Module 6/8/10 Ton	MXD-A12K2A
	Pressure Diff Module 12 Ton	MXD-A38K2A
Hail Guards	Hail Guard 4TVH/TVR0072B	TVRGARD001A
	Hail Guard 4TVH/TVR0096-0144B	TVRGARD002A
	Hail Guard 4TVH0036-0053B	TVRGARD003A

Product Specifications

Outdoor Units

Table 4. 208-230V Heat Pump Single Modules

Model Name				4TVH0072B300NB		4TVH0096B300NB		4TVH0120B300NB		4TVH0144B300NB	
Power Supply				208-230/60/3		208-230/60/3		208-230/60/3		208-230/60/3	
Performance	Nominal Tons			6.0		8.0		10.0		12.0	
	System Type			Ducted	Non-ducted	Ducted	Non-ducted	Ducted	Non-ducted	Ducted	Non-ducted
	Capacity (Nominal)[a]	Cooling	Btuh	72,000	72,000	96,000	96,000	120,000	120,000	144,000	144,000
		Heating	Btuh	81,000	81,000	108,000	108,000	135,000	135,000	162,000	162,000
	Capacity (Rated)[b]	Cooling	Btuh	69,000	69,000	92,000	92,000	114,000	114,000	138,000	138,000
		High Temp Heating	Btuh	77,000	77,000	103,000	103,000	129,000	129,000	154,000	154,000
		Low Temp Heating	Btuh	51,000	51,000	67,000	67,000	84,000	84,000	100,000	100,000
	AHRI -1230 Efficiency Ratings[b]	EER	-	11.50	12.90	11.60	13.80	11.10	12.50	10.80	11.20
		IEER	-	22.50	33.00	23.00	31.00	21.80	26.70	21.10	24.50
		COP @ 47°F	-	3.46	4.15	3.60	4.23	3.43	3.97	3.54	3.64
		COP @ 17°F	-	2.49	2.75	2.47	2.90	2.45	2.62	2.23	2.40
		SCHE	-	-	-	-	-	-	-	-	-
Power	MCA		A	28		37.8		43		52.6	
	MOP		A	35		50		50		70	
	SCCR		kA	-		-		-		5.0	
Compressor	Type (Qty.)		-	SSC SCROLL (1)		SSC SCROLL (2)		SSC SCROLL (2)		SSC SCROLL (2)	
	Model Name		-	DS-GB052FBVASG		DS-GB052FBVASG (2)		DS-GB052FBVASG (2)		DS-GB052FBVASG (2)	
	Output		kW each	4.96		4.96		4.96		4.96	
	Oil	Type	-	PVE		PVE		PVE		PVE	
	Initial Charge		fl. oz.	77.8		155.5		155.5		155.5	
Fan	Type (Qty.)		-	Propeller (1)		Propeller (2)		Propeller (2)		Propeller (2)	
	Output (Each)		W	400		620		620		620	
	Airflow Rate		CFM	7,240		9,180		9,180		9,535	
	External Static Pressure		In. WG	0.31		0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	3/8" Braze		3/8" Braze		1/2" Braze		1/2" Braze	
	Gas Pipe		Ø inch	3/4" Braze		7/8" Braze		1 1/8" Braze		1 1/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	N/A		N/A		N/A		N/A	
	Installation Limits	Max Length[c]	ft.	656 (722)		656 (722)		656 (722)		656 (722)	
		Max Height[d]	ft.	361 (131)		361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	12		16		20		25	
	Total Capacity		-	50 To 130% Of Total Outdoor Unit Capacity							
Refrigerant	Type		-	R-410A		R-410A		R-410A		R-410A	
	Factory Charge		lbs.	12.1		16.3		16.3		19.18	
Sound[e]	Sound Pressure		dB(A)	60.0		61.0		61.0		62.0	
	Sound Power		dB(A)	81		81		81		83	
External Dimensions	Net Weight		lbs.	425		624		624		657	
	Shipping Weight		lbs.	461		666		666		699	
	Net Dimensions (WXHXD)		inches	34.65 X 66.73 X 30.12		50.98 X 66.73 X 30,12		50.98 X 66.73 X 30,12		50.98 X 66.73 X 30.12	
	Shipping Dimensions (WXHXD)		inches	37.32 X 75.28 X 32.76		53.66 X 75.28 X 32.76		53.66 X 75.28 X 32.76		53.66 X 75.28 X 32.76	
Operating Temp Range	Cooling		°F	23 ~ 120		23 ~ 120		23 ~ 120		23 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75		-13 ~ 75	

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB
(b) Rated per AHRI-1230 Standard conditions.
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. (If the height difference exceeds 164 ft., request engineering support from Trane). If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.

Table 5. 208~230V Heat Pump Dual Modules I

Model Name				4TVH0168B300NB		4TVH0192B300NB		4TVH0216B300NB	
				4TVH0072B300NB + 4TVH0096B300NB		4TVH0072B300NB + 4TVH0120B300NB		4TVH0072B300NB + 4TVH0144B300NB	
Power Supply				208-230/60/3		208-230/60/3		208-230/60/3	
Performance	Nominal Tons			14.0		16.0		18.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)(a)	Cooling	Btuh	168,000	168,000	192,000	192,000	216,000	216,000
		Heating	Btuh	189,000	189,000	216,000	216,000	243,000	243,000
	Capacity (Rated)(b)	Cooling	Btuh	160,000	160,000	184,000	183,000	206,000	206,000
		High Temp Heating	Btuh	180,000	180,000	206,000	206,000	230,000	230,000
		Low Temp Heating	Btuh	118,000	118,000	134,000	134,000	150,000	150,000
	AHRI -1230 Efficiency Ratings(b)	EER	-	11.40	12.10	10.90	11.40	10.60	10.80
		IEER	-	20.80	25.90	21.50	24.10	20.50	22.40
		COP @ 47°F	-	3.46	3.94	3.34	3.83	3.34	3.63
		COP @ 17°F	-	2.43	2.65	2.42	2.59	2.31	2.52
		SCHE	-	-	-	-	-	-	-
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (3)		SSC Scroll (3)		SSC Scroll (3)	
	Model Name		-	DS-GB052FBVASG x 3		DS-GB052FBVASG x 3		DS-GB052FBVASG x 3	
	Output		kW each	4.96 x 3		4.96 x 3		4.96 x 3	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	233.3		233.3		233.3	
Fan	Type (Qty.)		-	Propeller (3)		Propeller (3)		Propeller (3)	
	Output (Each)		W	400 + 620 x 2		400 + 620 x 2		400 + 620 x 2	
	Airflow Rate		CFM	7,240 + 9,180		7,240 + 9,180		7,240 + 9,535	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	5/8" Braze		5/8" Braze		5/8" Braze	
	Gas Pipe		Ø inch	1 1/8" Braze		1 1/8" Braze		1 1/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	N/A		N/A		N/A	
	Installation Limits	Max Length(c)	ft.	656 (722)		656 (722)		656 (722)	
		Max Height(d)	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	29		33		37	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R-410A		R-410A		R-410A	
	Factory Charge		lbs.	28.4		28.4		31.3	
Sound(e)	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	425 + 624		425 + 624		425 + 657	
	Shipping Weight		lbs.	461 + 666		461 + 666		461 + 699	
	Net Dimensions (WXHXD)		inches	34.65 x 66.73 x 30.12 + 50.98 x 66.73 x 30.12		34.65 x 66.73 x 30.12 + 50.98 x 66.73 x 30.12		34.65 x 66.73 x 30.12 + 50.98 x 66.73 x 30.12	
	Shipping Dimensions (WXHXD)		inches	37.32 x 75.28 x 32.76 + 53.66 x 75.28 x 32.76		37.32 x 75.28 x 32.76 + 53.66 x 75.28 x 32.76		37.32 x 75.28 x 32.76 + 53.66 x 75.28 x 32.76	
Operating Temp Range	Cooling		°F	23 ~ 120		23 ~ 120		23 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires 4TDK3819B0000A outdoor unit T-joint connection

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference; Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB
(b) Rated per AHRI-1230 Standard conditions.
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.

Table 6. 208~230V Heat Pump Dual Modules II

Model Name				4TVH0240B300NB		4TVH0264B300NB		4TVH0288B300NB	
				2x 4TVH0120B300NB		4TVH0120B300NB + 4TVH0144B300NB		2x 4TVH0144B300NB	
Power Supply				208-230/60/3		208-230/60/3		208-230/60/3	
Performance	Nominal Tons			20.0		22.0		24.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)(a)	Cooling	Btuh	240,000	240,000	264,000	264,000	288,000	288,000
		Heating	Btuh	270,000	270,000	297,000	297,000	324,000	324,000
	Capacity (Rated)(b)	Cooling	Btuh	228,000	228,000	252,000	252,000	276,000	276,000
		High Temp Heating	Btuh	258,000	258,000	282,000	282,000	308,000	308,000
		Low Temp Heating	Btuh	168,000	168,000	184,000	184,000	200,000	200,000
	AHRI -1230 Efficiency Ratings(b)	EER	-	10.60	11.10	10.10	10.50	10.00	9.50
		IEER	-	19.10	21.80	18.60	21.50	18.60	21.00
		COP @ 47°F	-	3.24	3.65	3.25	3.45	3.25	3.26
		COP @ 17°F	-	2.40	2.54	2.26	2.41	2.12	2.29
		SCHE	-	-	-	-	-	-	-
Power	MCA		A	28		37.8		43	
	MOP		A	35		50		50	
	SCCR		kA	-		-		-	
Compressor	Type (Qty.)		-	SSC Scroll (1)		SSC Scroll (2)		SSC Scroll (2)	
	Model Name		-	DS-GB052FBVASG		DS-GB052FBVASG x 2		DS-GB052FBVASG x 2	
	Output		kW each	4.96 x 4		4.96 x 4		4.96 x 4	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	311.1		311.1		311.1	
Fan	Type (Qty.)		-	Propeller (4)		Propeller (4)		Propeller (4)	
	Output (Each)		W	620 x 4		620 x 4		620 x 4	
	Airflow Rate		CFM	9180 x 2		9,180 + 9,535		9535 x 2	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	5/8" Braze		3/4" Braze		3/4" Braze	
	Gas Pipe		Ø inch	1 1/8" Braze		1 3/8" Braze		1 3/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	N/A		N/A		N/A	
	Installation Limits	Max Length(c)	ft.	656 (722)		656 (722)		656 (722)	
		Max Height(d)	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	41		45		49	
	Total Capacity		-	50 to 130% of total outdoor unit cooling capacity					
Refrigerant	Type		-	R410A		R410A		R410A	
	Factory Charge		lbs.	32.6		35.5		38.4	
Sound(e)	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	624 x 2		624 + 657		657 x 2	
	Shipping Weight		lbs.	699 x 2		665 + 699		699 x 2	
	Net Dimensions (WXHXD)		inches	(50.98 x 66.73 x 30.12) x 2		(50.98 x 66.73 x 30.12) x 2		(50.98 x 66.73 x 30.12) x 2	
	Shipping Dimensions (WXHXD)		inches	(53.66 x 75.28 x 32.76) x 2		(53.66 x 75.28 x 32.76) x 2		(53.66 x 75.28 x 32.76) x 2	
Operating Temp Range	Cooling		°F	23 ~ 120		23 ~ 120		23 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires 4TDK3819B0000A outdoor unit T-joint connection

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions.
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.

Table 7. 208-230V Heat Pump Triple Modules I

Model Name				4TVH0312B300NB		4TVH0336B300NB		4TVH0360B300NB	
				4TVH0072B300NB + 4TVH0096B300NB + 4TVH0144B300NB		4TVH0072B300NB + 4TVH0120B300NB + 4TVH0144B300NB		4TVH0072B300NB + 2x 4TVH0144B300NB	
Power Supply				208-230/60/3		208-230/60/3		208-230/60/3	
Performance	Nominal Tons			26.0		28.0		30.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)(a)	Cooling	Btuh	312,000	312,000	336,000	336,000	360,000	360,000
		Heating	Btuh	351,000	351,000	378,000	378,000	405,000	405,000
	Capacity (Rated)(b)	Cooling	Btuh	298,000	298,000	320,000	320,000	344,000	344,000
		High Temp Heating	Btuh	334,000	334,000	360,000	360,000	386,000	386,000
		Low Temp Heating	Btuh	218,000	218,000	234,000	234,000	250,000	250,000
	AHRI -1230 Efficiency Ratings[2]	EER	-	10.30	10.50	10.00	10.20	9.80	9.80
		IEER	-	18.30	21.20	17.10	20.50	16.60	20.00
		COP @ 47°F	-	3.20	3.38	3.20	3.27	3.20	3.22
		COP @ 17°F	-	2.25	2.54	2.21	2.39	2.11	2.31
		SCHE	-	-	-	-	-	-	-
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (5)		SSC Scroll (5)		SSC Scroll (5)	
	Model Name		-	DS-GB052FBVASG (5)		DS-GB052FBVASG (5)		DS-GB052FBVASG (5)	
	Output		kW each	4.96 x 5		4.96 x 5		4.96 x 5	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	388.9		388.9		388.9	
Fan	Type (Qty.)		-	Propeller (5)		Propeller (5)		Propeller (5)	
	Output (Each)		W	400 + 620 x 4		400 + 620 x 4		400 + 620 x 4	
	Airflow Rate		CFM	7,240 + 9,180 + 9,535		7,240 + 9,180 + 9,535		7,240 + (9,535 x2)	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	3/4" Braze		3/4" Braze		3/4" Braze	
	Gas Pipe		Ø inch	1 3/8" Braze		1 3/8" Braze		1 5/8" Braze	
	High Pressure Gas Pipe (For Hr)		Ø inch	N/A		N/A		N/A	
	Installation Limits	Max Length(c)	ft.	656 (722)		656 (722)		656 (722)	
		Max Height(d)	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	54		58		62	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R410A		R410A		R410A	
	Factory Charge		lbs.	47.6		47.6		50.5	
Sound(e)	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	425 + 624 + 657		425 + 624 + 657		425 + (657 x2)	
	Shipping Weight		lbs.	461 + 666 + 699		461 + 666 + 699		461 + (699 x2)	
	Net Dimensions (WxHxD)		inches	34.65 x 66.73 x 30.12 + (50.98 x 66.73 x 30.12) x2		34.65 x 66.73 x 30.12 + (50.98 x 66.73 x 30.12) x2		34.65 x 66.73 x 30.12 + (50.98 x 66.73 x 30.12) x2	
	Shipping Dimensions (WxHxD)		inches	37.32 x 75.28 x 32.76 + (53.66 x 75.28 x 32.76) x2		7.32 x 75.28 x 32.76 + (53.66 x 75.28 x 32.76) x2		37.32 x 75.28 x 32.76 + (53.66 x 75.28 x 32.76) x2	
Operating Temp Range	Cooling		°F	23 ~ 120		23 ~ 120		23 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires two 4TDK3819B0000A outdoor unit T-joint connections

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions (published ratings apply to systems ≤ 300,000 Btuh).
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft..
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.

Table 8. 208-230V Heat Pump Triple Modules II

Model Name				4TVH0384B300NB		4TVH0408B300NB		4TVH0432B300NB	
				2x 4TVH0120B300NB + 4TVH0144B300NB		4TVH0120B300NB + 2x 4TVH0144B300NB		3x 4TVH0144B300NB	
Power Supply				208-230/60/3		208-230/60/3		208-230/60/3	
Performance	Nominal Tons			32.0		34.0		36.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)[a]	Cooling	Btuh	384,000	384,000	408,000	408,000	432,000	432,000
		Heating	Btuh	432,000	432,000	459,000	459,000	486,000	486,000
	Capacity (Rated)[b]	Cooling	Btuh	366,000	366,000	390,000	390,000	415,000	415,000
		High Temp Heating	Btuh	410,000	410,000	435,000	435,000	460,000	460,000
		Low Temp Heating	Btuh	268,000	268,000	284,000	284,000	300,000	300,000
	AHRI -1230 Efficiency Ratings[b]	EER	-	9.50	9.50	9.50	9.50	9.50	9.50
		IEER	-	16.50	19.50	16.40	19.10	16.30	19.10
		COP @ 47°F	-	3.20	3.20	3.20	3.20	3.20	3.20
		COP @ 17°F	-	2.05	2.10	2.05	2.05	2.05	2.05
		SCHE	-	-	-	-	-	-	-
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (6)		SSC Scroll (6)		SSC Scroll (6)	
	Model Name		-	DS-GB052FBVASG (6)		DS-GB052FBVASG (6)		DS-GB052FBVASG (6)	
	Output		kW each	4.96 x 6		4.96 x 6		4.96 x 6	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	466.6		466.6		466.6	
Fan	Type (Qty.)		-	Propeller (6)		Propeller (6)		Propeller (6)	
	Output (Each)		W	620 x 6		620 x 6		620 x 6	
	Airflow Rate		CFM	(9,180 x2) + 9535		9,180 + (2x 9,535)		9535 x 3	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	3/4" Braze		3/4" Braze		3/4" Braze	
	Gas Pipe		Ø inch	1 5/8" Braze		1 5/8" Braze		1 5/8" Braze	
	High Pressure Gas Pipe (For Hr)		Ø inch	N/A		N/A		N/A	
	Installation Limits	Max Length[c]	ft.	656 (722)		656 (722)		656 (722)	
		Max Height[d]	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	64		64		64	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R410A		R410A		R410A	
	Factory Charge		lbs.	51.8		54.7		57.5	
Sound[e]	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	(624 x 2) + 657		624 + (657 x2)		657 x 3	
	Shipping Weight		lbs.	(666 x2) + 699		666 + (699 x2)		699 x 3	
	Net Dimensions (WxHxD)		inches	(50.98 x 66.73 x 30.12) x 3		(50.98 x 66.73 x 30.12) x 3		(50.98 x 66.73 x 30.12) x 3	
	Shipping Dimensions (WxHxD)		inches	(53.66 x 75.28 x 32.76) x 3		(53.66 x 75.28 x 32.76) x 3		(53.66 x 75.28 x 32.76) x 3	
Operating Temp Range	Cooling		°F	23 ~ 120		23 ~ 120		23 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires two 4TDK3819B0000A outdoor unit T-joint connections

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions (published ratings apply to systems ≤ 300,000 Btuh).
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions

Table 9. 208-230V Heat Recovery Single Modules

Model Name				4TVR0072B300NB		4TVR0096B300NB		4TVR0120B300NB		4TVR0144B300NB	
Power Supply				208-230/60/3		208-230/60/3		208-230/60/3		208-230/60/3	
Performance	Nominal Tons			6.0		8.0		10.0		12.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)[a]	Cooling	Btuh	72,000	72,000	96,000	96,000	120,000	120,000	144,000	144,000
		Heating	Btuh	81,000	81,000	108,000	108,000	135,000	135,000	162,000	162,000
	Capacity (Rated)[b]	Cooling	Btuh	69,000	69,000	92,000	92,000	114,000	114,000	138,000	138,000
		High Temp Heating	Btuh	77,000	77,000	103,000	103,000	129,000	129,000	154,000	154,000
		Low Temp Heating	Btuh	51,000	51,000	67,000	67,000	84,000	84,000	100,000	100,000
	AHRI -1230 Efficiency Ratings[b]	EER	-	11.50	12.90	11.60	13.80	11.10	12.50	10.80	11.20
		IEER	-	22.50	33.00	23.00	31.00	21.80	26.70	21.10	24.50
		COP @ 47°F	-	3.46	4.15	3.60	4.23	3.43	3.97	3.54	3.64
		COP @ 17°F	-	2.49	2.75	2.47	2.90	2.45	2.62	2.23	2.40
		SCHE	-	26.00	28.00	26.50	32.00	25.50	31.00	25.00	27.50
Power	MCA		A	28		37.8		43		52.6	
	MOP		A	35		50		50		70	
	SCCR		kA	-		-		-		5.0	
Compressor	Type (Qty.)		-	SSC Scroll (1)		SSC Scroll (2)		SSC Scroll (2)		SSC Scroll (2)	
	Model Name		-	DS-GB052FBVASG		DS-GB052FBVASG x 2		DS-GB052FBVASG x 2		DS-GB052FBVASG x 2	
	Output		kW each	4.96		4.96 x 2		4.96 x 2		4.96 x 2	
	Oil	Type	-	PVE		PVE		PVE		PVE	
		Initial Charge	fl. oz.	77.8		155.5		155.5		155.5	
Fan	Type (Qty.)		-	Propeller (1)		Propeller (2)		Propeller (2)		Propeller (2)	
	Output (Each)		W	400		620		620		620	
	Airflow Rate		CFM	7,240		9,180		9,180		9,535	
	External Static Pressure		in. WG	0.31		0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	3/8" Braze		3/8" Braze		1/2" Braze		1/2" Braze	
	Gas Pipe		Ø inch	3/4" Braze		7/8" Braze		1 1/8" Braze		1 1/8" Braze	
	High Pressure Gas Pipe (For Hr)		Ø inch	5/8" Braze		3/4" Braze		7/8" Braze		7/8" Braze	
	Installation Limits	Max Length[c]	ft.	656 (722)		656 (722)		656 (722)		656 (722)	
		Max Height[d]	ft.	361 (131)		361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	12		16		20		25	
	Total Capacity		-	50 to 130% of total outdoor unit capacity							
Refrigerant	Type		-	R410A		R410A		R410A		R410A	
	Factory Charge		lbs.	12.1		16.3		16.3		19.18	
Sound[e]	Sound Pressure		dB(A)	60.0		61.0		61.0		62.0	
	Sound Power		dB(A)	81		81		81		83	
External Dimensions	Net Weight		lbs.	430		637		637		672	
	Shipping Weight		lbs.	465		679		679		714	
	Net Dimensions (WxHxD)		inches	34.65 x 66.73 x 30.12		50.98 x 66.73 x 30,12		50.98 x 66.73 x 30,12		50.98 x 66.73 x 30.12	
	Shipping Dimensions (WxHxD)		inches	37.32 x 75.28 x 32.76		53.66 x 75.28 x 32.76		53.66 x 75.28 x 32.76		53.66 x 75.28 x 32.76	
Operating Temp Range	Cooling[f]		°F	5 ~ 120		5 ~ 120		5 ~ 120		5 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75		-13 ~ 75	

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions.
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.
(f) Cooling operation between 23° F and 5° F requires mixed mode condition (at least 50% of the indoor units must be in heating mode).

Table 10. 208-230V Heat Recovery Dual Modules I

Model Name				4TVR0168B300NB		4TVR0192B300NB		4TVR0216B300NB	
				4TVR0072B300NB + 4TVR0096B300NB		4TVR0072B300NB + 4TVR0120B300NB		4TVR0072B300NB + 4TVR0144B300NB	
Power Supply				208-230/60/3		208-230/60/3		208-230/60/3	
Performance	Nominal Tons			14.0		16.0		18.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)(a)	Cooling	Btuh	168,000	168,000	192,000	192,000	216,000	216,000
		Heating	Btuh	189,000	189,000	216,000	216,000	243,000	243,000
	Capacity (Rated)(b)	Cooling	Btuh	160,000	160,000	184,000	184,000	206,000	206,000
		High Temp Heating	Btuh	180,000	180,000	206,000	206,000	230,000	230,000
		Low Temp Heating	Btuh	118,000	118,000	134,000	134,000	150,000	150,000
	AHRI -1230 Efficiency Ratings(b)	EER	-	11.40	12.10	10.90	11.40	10.60	10.80
		IEER	-	20.80	25.90	21.50	24.10	20.50	22.40
		COP @ 47°F	-	3.46	3.94	3.34	3.83	3.34	3.63
		COP @ 17°F	-	2.43	2.65	2.42	2.59	2.31	2.52
		SCHE	-	23.50	27.00	23.50	26.50	23.00	25.50
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (3)		SSC Scroll (3)		SSC Scroll (3)	
	Model Name		-	DS-GB052FBVASG x 3		DS-GB052FBVASG x 3		DS-GB052FBVASG x 3	
	Output		kW each	4.96 x 3		4.96 x 3		4.96 x 3	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	233.3		233.3		233.3	
Fan	Type (Qty.)		-	Propeller (3)		Propeller (3)		Propeller (3)	
	Output (Each)		W	400 + 620 x 2		400 + 620 x 2		400 + 620 x 2	
	Airflow Rate		CFM	7,240 + 9,180		7,240 + 9,180		7,240 + 9,535	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	5/8" Braze		5/8" Braze		5/8" Braze	
	Gas Pipe		Ø inch	1 1/8" Braze		1 1/8" Braze		1 1/8" Braze	
	High Pressure Gas Pipe (For Hr)		Ø inch	7/8" Braze		1 1/8" Braze		1 1/8" Braze	
	Installation Limits	Max Length(c)	ft.	656 (722)		656 (722)		656 (722)	
		Max Height(d)	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	29		33		37	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R410A		R410A		R410A	
	Factory Charge		lbs.	28.4		28.4		31.3	
Sound(e)	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	430 + 637		430 + 637		430 + 672	
	Shipping Weight		lbs.	465 + 479		465 + 479		465 + 714	
	Net Dimensions (WxHxD)		inches	34.65 x 66.73 x 30.12 + 50.98 x 66.73 x 30.12		34.65 x 66.73 x 30.12 + 50.98 x 66.73 x 30.12		34.65 x 66.73 x 30.12 + 50.98 x 66.73 x 30.12	
	Shipping Dimensions (WxHxD)		inches	37.32 x 75.28 x 32.76 + 53.66 x 75.28 x 32.76		37.32 x 75.28 x 32.76 + 53.66 x 75.28 x 32.76		37.32 x 75.28 x 32.76 + 53.66 x 75.28 x 32.76	
Operating Temp Range	Cooling(f)		°F	5 ~ 120		5 ~ 120		5 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires 4TDK3819B0000A and 4TDK3100B0000A outdoor unit T-joint connections

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions.
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.
(f) Cooling operation between 23° F and 5° F requires mixed mode condition (at least 50% of the indoor units must be in heating mode).

Table 11. 208~230V Heat Recovery Dual Modules II

Model Name				4TVR0240B300NB		4TVR0264B300NB		4TVR0288B300NB	
				2x 4TVR0120B300NB		4TVR0120B300NB + 4TVR0144B300NB		2x 4TVR0144B300NB	
Power Supply				208-230/60/3		208-230/60/3		208-230/60/3	
Performance	Nominal Tons			20.0		22.0		24.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)[(a)]	Cooling	Btuh	240,000	240,000	264,000	264,000	288,000	288,000
		Heating	Btuh	270,000	270,000	297,000	297,000	324,000	324,000
	Capacity (Rated)[(b)]	Cooling	Btuh	228,000	228,000	252,000	252,000	276,000	276,000
		High Temp Heating	Btuh	258,000	258,000	282,000	282,000	308,000	308,000
		Low Temp Heating	Btuh	168,000	168,000	184,000	184,000	200,000	200,000
	AHRI -1230 Efficiency Ratings[(b)]	EER	-	10.60	11.10	10.10	10.50	10.00	9.50
		IEER	-	19.10	21.80	18.60	21.50	18.60	21.00
		COP @ 47°F	-	3.24	3.65	3.25	3.45	3.25	3.26
		COP @ 17°F	-	2.40	2.54	2.26	2.41	2.12	2.29
		SCHE	-	22.50	25.50	22.00	24.50	21.50	23.50
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (4)		SSC Scroll (4)		SSC Scroll (4)	
	Model Name		-	DS-GB052FBVASG x 4		DS-GB052FBVASG x 4		DS-GB052FBVASG x 4	
	Output		kW each	4.96 x 4		4.96 x 4		4.96 x 4	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	311.1		311.1		311.1	
Fan	Type (Qty.)		-	Propeller (4)		Propeller (4)		Propeller (4)	
	Output (Each)		W	620 x 4		620 x 4		620 x 4	
	Airflow Rate		CFM	9180 x 2		9,180 + 9,535		9535 x 2	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	5/8" Braze		3/4" Braze		3/4" Braze	
	Gas Pipe		Ø inch	1 1/8" Braze		1 3/8" Braze		1 3/8" Braze	
	High Pressure Gas Pipe (For Hr)		Ø inch	1 1/8" Braze		1 1/8" Braze		1 1/8" Braze	
	Installation Limits	Max Length[(c)]	ft.	656 (722)		656 (722)		656 (722)	
		Max Height[(d)]	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	41		45		49	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R-410A		R410A		R410A	
	Factory Charge		lbs.	32.6		32.6		35.5	
Sound[(e)]	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	637 x 2		637 x 2		637 + 672	
	Shipping Weight		lbs.	714 x 2		679 x 2		679 + 714	
	Net Dimensions (WxHxD)		inches	(50.98 x 66.73 x 30.12) x 2		(50.98 x 66.73 x 30.12) x 2		(50.98 x 66.73 x 30.12) x 2	
	Shipping Dimensions (WxHxD)		inches	(53.66 x 75.28 x 32.76) x 2		(53.66 x 75.28 x 32.76) x 2		(53.66 x 75.28 x 32.76) x 2	
Operating Temp Range	Cooling[(f)]		°F	23 ~ 120		5 ~ 120		5 ~ 120	
	Heating		°F	-4 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires 4TDK3819B0000A and 4TDK3100B0000A outdoor unit T-joint connections

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.

(b) Rated per AHRI-1230 Standard conditions.

(c) Actual length (equivalent length in parenthesis).

(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.

(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.

(f) Cooling operation between 23° F and 5° F requires mixed mode condition (at least 50% of the indoor units must be in heating mode).

Table 12. 208-230V Heat Recovery Triple Modules I

Model Name				4TVR0312B300NB		4TVR0336B300NB		4TVR0360B300NB	
				4TVR0072B300NB + 4TVR0096B300NB + 4TVR0144B300NB		4TVR0072B300NB + 4TVR0120B300NB + 4TVR0144B300NB		4TVR0072B300NB + 2x 4TVR0144B300NB	
Power Supply				208-230/60/3		208-230/60/3		208-230/60/3	
Performance	Nominal Tons			26.0		28.0		30.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)[a]	Cooling	Btuh	312,000	312,000	336,000	336,000	360,000	360,000
		Heating	Btuh	351,000	351,000	378,000	378,000	405,000	405,000
	Capacity (Rated)[b]	Cooling	Btuh	298,000	298,000	320,000	320,000	344,000	344,000
		High Temp Heating	Btuh	334,000	334,000	360,000	360,000	386,000	386,000
		Low Temp Heating	Btuh	218,000	218,000	234,000	234,000	250,000	250,000
	AHRI -1230 Efficiency Ratings[b]	EER	-	10.30	10.50	10.00	10.20	9.80	9.80
		IEER	-	18.30	21.20	17.10	20.50	16.60	20.00
		COP @ 47°F	-	3.20	3.38	3.20	3.27	3.20	3.22
		COP @ 17°F	-	2.25	2.54	2.21	2.39	2.11	2.31
		SCHE	-	20.50	23.50	20.50	23.10	20.00	22.40
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (5)		SSC Scroll (5)		SSC Scroll (5)	
	Model Name		-	DS-GB052FBVASG x 5		DS-GB052FBVASG x 5		DS-GB052FBVASG x 5	
	Output		kW each	4.96 x 5		4.96 x 5		4.96 x 5	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	388.9		388.9		388.9	
Fan	Type (Qty.)		-	Propeller (5)		Propeller (5)		Propeller (5)	
	Output (Each)		W	400 + 620 x 4		400 + 620 x 4		400 + 620 x 4	
	Airflow Rate		CFM	7,240 + 9,180 + 9,535		7,240 + 9,180 + 9,535		7,240 + (9,535 x2)	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	3/4" Braze		3/4" Braze		3/4" Braze	
	Gas Pipe		Ø inch	1 3/8" Braze		1 3/8" Braze		1 5/8" Braze	
	High Pressure Gas Pipe (For Hr)		Ø inch	1 1/8" Braze		1 1/8" Braze		1 3/8" Braze	
	Installation Limits	Max Length[c]	ft.	656 (722)		656 (722)		656 (722)	
		Max Height[d]	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	54		58		62	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R410A		R410A		R410A	
	Factory Charge		lbs.	47.6		47.6		50.5	
Sound[e]	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	430 + 637 + 672		430 + 637 + 672		430 + (672 x 2)	
	Shipping Weight		lbs.	465 + 679 + 714		465 + 679 + 714		465 + (714 x 2)	
	Net Dimensions (WxHxD)		inches	34.65 x 66.73 x 30.12 +(50.98 x 66.73 x 30.12) x2		34.65 x 66.73 x 30.12 +(50.98 x 66.73 x 30.12) x2		34.65 x 66.73 x 30.12 +(50.98 x 66.73 x 30.12) x2	
	Shipping Dimensions (WxHxD)		inches	37.32 x 75.28 x 32.76 + (53.66 x 75.28 x 32.76) x2		37.32 x 75.28 x 32.76 + (53.66 x 75.28 x 32.76) x2		37.32 x 75.28 x 32.76 + (53.66 x 75.28 x 32.76) x2	
Operating Temp Range	Cooling[f]		°F	5 ~ 120		5 ~ 120		5 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires two each 4TDK3819B0000A and 4TDK3100B0000A outdoor unit T-joint connections

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions (published ratings apply to systems ≤ 300,000 Btuh).
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.
(f) Cooling operation between 23° F and 5° F requires mixed mode condition (at least 50% of the indoor units must be in heating mode).

Table 13. 208-230V Heat Recovery Triple Modules II

Model Name					4TVR0384B300NB		4TVR0408B300NB		4TVR0432B300NB	
					2x 4TVR0120B300NB + 4TVR0144B300NB		4TVR0120B300NB + 2x 4TVR0144B300NB		3x 4TVR0144B300NB	
Power Supply					208-230/60/3		208-230/60/3		208-230/60/3	
Performance	Nominal Tons				32.0		34.0		36.0	
	System Type				Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)(a)	Cooling		Btuh	384,000	384,000	408,000	408,000	432,000	432,000
		Heating		Btuh	432,000	432,000	459,000	459,000	486,000	486,000
	Capacity (Rated)(b)	Cooling		Btuh	366,000	366,000	390,000	390,000	415,000	415,000
		High Temp Heating		Btuh	410,000	410,000	435,000	435,000	460,000	460,000
		Low Temp Heating		Btuh	268,000	268,000	284,000	284,000	300,000	300,000
	AHRI -1230 Efficiency Ratings(b)	EER		-	9.50	9.50	9.50	9.50	9.50	9.50
		IEER		-	16.50	19.50	16.40	19.10	16.30	19.10
		COP @ 47°F		-	3.20	3.20	3.20	3.20	3.20	3.20
		COP @ 17°F		-	2.05	2.10	2.05	2.05	2.05	2.05
		SCHE		-	16.50	23.00	19.00	22.00	19.00	21.50
Power	MCA			A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP			A						
	SCCR			kA						
Compressor	Type (Qty.)			-	SSC Scroll (6)		SSC Scroll (6)		SSC Scroll (6)	
	Model Name			-	DS-GB052FBVASG x 6		DS-GB052FBVASG x 6		DS-GB052FBVASG x 6	
	Output			kW each	4.96 x 6		4.96 x 6		4.96 x 6	
	Oil	Type		-	PVE		PVE		PVE	
		Initial Charge		fl. oz.	466.6		466.6		466.6	
Fan	Type (Qty.)			-	Propeller (6)		Propeller (6)		Propeller (6)	
	Output (Each)			W	620 x 6		620 x 6		620 x 6	
	Airflow Rate			CFM	(9,180 x2) + 9535		9,180 + (2x 9,535)		9535 x 3	
	External Static Pressure			in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe			Ø inch	3/4" Braze		3/4" Braze		3/4" Braze	
	Gas Pipe			Ø inch	1 5/8" Braze		1 5/8" Braze		1 5/8" Braze	
	High Pressure Gas Pipe (For Hr)			Ø inch	1 3/8" Braze		1 3/8" Braze		1 3/8" Braze	
	Installation Limits	Max Length(c)		ft.	656 (722)		656 (722)		656 (722)	
		Max Height(d)		ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units			-	64		64		64	
	Total Capacity			-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type			-	R410A		R410A		R410A	
	Factory Charge			lbs.	51.8		54.7		57.5	
Sound(e)	Sound Pressure			dB(A)	-		-		-	
	Sound Power			dB(A)	-		-		-	
External Dimensions	Net Weight			lbs.	(637 x 2) + 672		(637 x 2) + 672		672 x 2	
	Shipping Weight			lbs.	(679 x 2) + 714		(679 x2) + 714		714 x 2	
	Net Dimensions (WxHxD)			inches	(50.98 x 66.73 x 30.12) x 3		(50.98 x 66.73 x 30.12) x 3		(50.98 x 66.73 x 30.12) x 3	
	Shipping Dimensions (WxHxD)			inches	(53.66 x 75.28 x 32.76) x 3		(53.66 x 75.28 x 32.76) x 3		(53.66 x 75.28 x 32.76) x 3	
Operating Temp Range	Cooling(f)			°F	5 ~ 120		5 ~ 120		5 ~ 120	
	Heating			°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires two each 4TDK3819B0000A and 4TDK3100B0000A outdoor unit T-joint connections

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions (published ratings apply to systems ≤ 300,000 Btuh).
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.
(f) Cooling operation between 23° F and 5° F requires mixed mode condition (at least 50% of the indoor units must be in heating mode).

Product Specifications

Table 14. 460V Heat Pump Single Modules

Model Name				4TVH0072B400NB		4TVH0096B400NB		4TVH0120B400NB		4TVH0144B400NB	
Power Supply				460/60/3		460/60/3		460/60/3		460/60/3	
Performance	Nominal Tons			6.0		8.0		10.0		12.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal) (a)	Cooling	Btuh	72,000	72,000	96,000	96,000	120,000	120,000	144,000	144,000
		Heating	Btuh	81,000	81,000	108,000	108,000	135,000	135,000	162,000	162,000
	Capacity (Rated)(b)	Cooling	Btuh	69,000	69,000	92,000	92,000	114,000	114,000	138,000	138,000
		High Temp Heating	Btuh	77,000	77,000	103,000	103,000	129,000	129,000	154,000	154,000
		Low Temp Heating	Btuh	51,000	51,000	67,000	67,000	84,000	84,000	100,000	100,000
	AHRI -1230 Efficiency Ratings(b)	EER	-	11.50	12.90	11.50	13.90	11.10	12.40	10.80	11.20
		IEER	-	22.50	33.00	22.40	29.60	21.20	27.10	21.10	24.50
		COP @ 47°F	-	3.46	4.15	3.56	4.23	3.43	3.97	3.54	3.64
		COP @ 17°F	-	2.49	2.75	2.45	2.81	2.44	2.53	2.23	2.40
		SCHE	-	-	-	-	-	-	-	-	-
Power	MCA		A	16.4		19		21.7		26.4	
	MOP		A	20		25		30		40	
	SCCR		kA	-		-		-		-	
Compressor	Type (Qty.)		-	SSC Scroll (1)		SSC Scroll (1)		SSC Scroll (1)		SSC Scroll (2)	
	Model Name		-	DS-GB052FAVASG		DS-GB066FAVASG		DS-GB066FAVASG		DS-GB052FAVASG	
	Output		kW	4.96		6.13		6.13		4.96 x 2	
	Oil	Type	-	PVE		PVE		PVE		PVE	
		Initial Charge	fl. oz.	77.8		77.8		77.8		155.5	
Fan	Type (Qty.)		-	Propeller (1)		Propeller (2)		Propeller (2)		Propeller (2)	
	Output (Each)		W	400		620		620		620	
	Airflow Rate		CFM	7,240		9,180		9,180		9,535	
	External Static Pressure		in. WG	0.31		0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	3/8" Braze		3/8" Braze		1/2" Braze		1/2" Braze	
	Gas Pipe		Ø inch	3/4" Braze		7/8" Braze		1 1/8" Braze		1 1/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	N/A		N/A		N/A		N/A	
	Installation Limits	Max Length(c)	ft.	656 (722)		656 (722)		656 (722)		656 (722)	
		Max Height(d)	ft.	361 (131)		361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	12		16		20		25	
	Total Capacity		-	50 to 130% of total outdoor unit capacity							
Refrigerant	Type		-	R-410A		R-410A		R-410A		R-410A	
	Factory Charge		lbs.	12.1		16.3		16.3		19.18	
Sound(e)	Sound Pressure		dB(A)	60.0		61.0		61.0		62.0	
	Sound Power		dB(A)	81		81		81		83	
External Dimensions	Net Weight		lbs.	437		540		540		672	
	Shipping Weight		lbs.	472		582		582		714	
	Net Dimensions (WxHxD)		inches	34.65 x 66.73 x 30.12		50.98 x 66.73 x 30,12		50.98 x 66.73 x 30,12		50.98 x 66.73 x 30.12	
	Shipping Dimensions (WxHxD)		inches	37.32 x 75.28 x 32.76		53.66 x 75.28 x 32.76		53.66 x 75.28 x 32.76		53.66 x 75.28 x 32.76	
Operating Temp Range	Cooling		°F	23 ~ 120		23 ~ 120		23 ~ 120		23 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75		-13 ~ 75	

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions.
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.

Table 15. 460V Heat Pump Dual Modules I

Model Name				4TVH0168B400NB		4TVH0192B400NB		4TVH0216B400NB	
				4TVH0072B400NB + 4TVH0096B400NB		4TVH0072B400NB + 4TVH0120B400NB		4TVH0072B400NB + 4TVH0144B400NB	
Power Supply				460/60/3		460/60/3		460/60/3	
Performance	Nominal Tons			14.0		16.0		18.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)[a]	Cooling	Btuh	168,000	168,000	192,000	192,000	216,000	216,000
		Heating	Btuh	189,000	189,000	216,000	216,000	243,000	243,000
	Capacity (Rated)[b]	Cooling	Btuh	160,000	160,000	184,000	184,000	206,000	206,000
		High Temp Heating	Btuh	180,000	180,000	206,000	206,000	230,000	230,000
		Low Temp Heating	Btuh	118,000	118,000	134,000	134,000	150,000	150,000
	AHRI -1230 Efficiency Ratings[b]	EER	-	11.30	12.10	10.90	11.20	10.60	10.80
		IEER	-	20.50	25.30	21.50	24.20	20.50	22.40
		COP @ 47°F	-	3.44	3.94	3.34	3.83	3.34	3.63
		COP @ 17°F	-	2.43	2.65	2.42	2.59	2.31	2.52
		SCHE	-	-	-	-	-	-	-
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (2)		SSC Scroll (2)		SSC Scroll (2)	
	Model Name		-	DS-GB052FAVASG + DS-GB066FAVASG		DS-GB052FAVASG + DS-GB066FAVASG		DS-GB052FAVASG x 2	
	Output		kW	4.96 + 6.13		4.96 + 6.13		4.96 x 3	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	155.5		155.5		233.3	
Fan	Type (Qty.)		-	Propeller (3)		Propeller (3)		Propeller (3)	
	Output (Each)		W	400 + 620 x 2		400 + 620 x 2		400 + 620 x 2	
	Airflow Rate		CFM	7,240 + 9,180		7,240 + 9,180		7,240 + 9,535	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	5/8" Braze		5/8" Braze		5/8" Braze	
	Gas Pipe		Ø inch	1 1/8" Braze		1 1/8" Braze		1 1/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	N/A		N/A		N/A	
	Installation Limits	Max Length[c]	ft.	656 (722)		656 (722)		656 (722)	
		Max Height[d]	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	29		33		37	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R410A		R410A		R410A	
	Factory Charge		lbs.	28.4		28.4		31.3	
Sound[e]	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	436 + 540		436 + 540		436 + 672	
	Shipping Weight		lbs.	472 + 582		472 + 582		472 + 714	
	Net Dimensions (WxHxD)		inches	34.65 x 66.73 x 30.12 + 50.98 x 66.73 x 30.12		34.65 x 66.73 x 30.12 + 50.98 x 66.73 x 30.12		34.65 x 66.73 x 30.12 + 50.98 x 66.73 x 30.12	
	Shipping Dimensions (WxHxD)		inches	37.32 x 75.28 x 32.76 + 53.66 x 75.28 x 32.76		37.32 x 75.28 x 32.76 + 53.66 x 75.28 x 32.76		37.32 x 75.28 x 32.76 + 53.66 x 75.28 x 32.76	
Operating Temp Range	Cooling		°F	23 ~ 120		23 ~ 120		23 ~ 120	
	Heating		°F	'-13 ~ 75		'-13 ~ 75		'-13 ~ 75	

Note: Requires 4TDK3819B0000A outdoor unit T-joint connection

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions.
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.

Table 16. 460V Heat Pump Dual Modules II

Model Name				4TVH0240B400NB		4TVH0264B400NB		4TVH0288B400NB	
				2x 4TVH0120B400NB		4TVH0120B400NB + 4TVH0144B400NB		2x 4TVH0144B400NB	
Power Supply				460/60/3		460/60/3		460/60/3	
Performance	Nominal Tons			20.0		22.0		24.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)[a]	Cooling	Btuh	240,000	240,000	264,000	264,000	288,000	288,000
		Heating	Btuh	270,000	270,000	297,000	297,000	324,000	324,000
	Capacity (Rated)[b]	Cooling	Btuh	228,000	228,000	252,000	252,000	276,000	276,000
		High Temp Heating	Btuh	258,000	258,000	282,000	282,000	308,000	308,000
		Low Temp Heating	Btuh	168,000	168,000	184,000	184,000	200,000	200,000
	AHRI -1230 Efficiency Ratings[b]	EER	-	10.60	10.70	10.10	10.10	10.00	9.90
		IEER	-	18.50	22.10	18.50	21.50	18.60	21.00
		COP @ 47°F	-	3.24	3.65	3.25	3.45	3.25	3.26
		COP @ 17°F	-	2.40	2.54	2.26	2.41	2.12	2.29
		SCHE	-	-	-	-	-	-	-
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (2)		SSC Scroll (3)		SSC Scroll (4)	
	Model Name		-	DS-GB066FAVASG x 2		DS-GB052FAVASG x 2 + DS-GB066FAVASG		DS-GB052FAVASG x 4	
	Output		kW	6.13 x 2		(4.96 x 2) + 6.13		4.96 x 4	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	155.5		233.3		311.1	
Fan	Type (Qty.)		-	Propeller (4)		Propeller (4)		Propeller (4)	
	Output (Each)		W	620 x 4		620 x 4		620 x 4	
	Airflow Rate		CFM	9180 x 2		9,180 + 9,535		9535 x 2	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	5/8" Braze		3/4" Braze		3/4" Braze	
	Gas Pipe		Ø inch	1 1/8" Braze		1 3/8" Braze		1 3/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	N/A		N/A		N/A	
	Installation Limits	Max Length[c]	ft.	656 (722)		656 (722)		656 (722)	
		Max Height[d]	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	41		45		49	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R410A		R410A		R410A	
	Factory Charge		lbs.	32.6		35.5		38.4	
Sound[e]	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	540 x 2		540 + 672		672 x 2	
	Shipping Weight		lbs.	582 x 2		582 + 714		714 x 2	
	Net Dimensions (WxHxD)		inches	(50.98 x 66.73 x 30.12) x 2		(50.98 x 66.73 x 30.12) x 2		(50.98 x 66.73 x 30.12) x 2	
	Shipping Dimensions (WxHxD)		inches	(53.66 x 75.28 x 32.76) x 2		(53.66 x 75.28 x 32.76) x 2		(53.66 x 75.28 x 32.76) x 2	
Operating Temp Range	Cooling		°F	23 ~ 120		23 ~ 120		23 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires 4TDK3819B0000A outdoor unit T-joint connection

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.

(b) Rated per AHRI-1230 Standard conditions.

(c) Actual length (equivalent length in parenthesis).

(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.

(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.

Table 17. 460V Heat Pump Triple Modules I

Model Name				4TVH0312B400NB		4TVH0336B400NB		4TVH0360B400NB	
				4TVH0072B400NB + 4TVH0096B400NB + 4TVH0144B400NB		4TVH0072B400NB + 4TVH0120B400NB + 4TVH0144B400NB		4TVH0072B400NB + 2x 4TVH0144B400NB	
Power Supply				460/60/3		460/60/3		460/60/3	
Performance	Nominal Tons			26.0		28.0		30.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)[a]	Cooling	Btuh	312,000	312,000	336,000	336,000	360,000	360,000
		Heating	Btuh	351,000	351,000	378,000	378,000	405,000	405,000
	Capacity (Rated)[b]	Cooling	Btuh	298,000	298,000	320,000	320,000	344,000	344,000
		High Temp Heating	Btuh	334,000	334,000	360,000	360,000	386,000	386,000
		Low Temp Heating	Btuh	218,000	218,000	234,000	234,000	250,000	250,000
	AHRI -1230 Efficiency Ratings[b]	EER	-	10.30	10.60	10.00	10.20	9.80	9.80
		IEER	-	18.10	20.90	17.00	20.50	16.60	20.00
		COP @ 47°F	-	3.20	3.38	3.20	3.27	3.20	3.22
		COP @ 17°F	-	2.25	2.51	2.21	2.39	2.11	2.31
		SCHE	-	-	-	-	-	-	-
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (4)		SSC Scroll (4)		SSC Scroll (5)	
	Model Name		-	DS-GB052FAVASG x 3 + DS-GB066FAVASG		DS-GB052FAVASG x 3 + DS-GB066FAVASG		DS-GB052FAVASG x 5	
	Output		kW	(4.96 x 3) + 6.13		(4.96 x 3) + 6.13		4.96 x 5	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	311.1		311.1		388.9	
Fan	Type (Qty.)		-	Propeller (5)		Propeller (5)		Propeller (5)	
	Output (Each)		W	400 + 620 x 4		400 + 620 x 4		400 + 620 x 4	
	Airflow Rate		CFM	7,240 + 9,180 + 9,535		7,240 + 9,180 + 9,535		7,240 + (9,535 x2)	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	3/4" Braze		3/4" Braze		3/4" Braze	
	Gas Pipe		Ø inch	1 3/8" Braze		1 3/8" Braze		1 5/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	N/A		N/A		N/A	
	Installation Limits	Max Length[c]	ft.	656 (722)		656 (722)		656 (722)	
		Max Height[d]	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	54		58		62	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R-410A		R-410A		R-410A	
	Factory Charge		lbs.	47.6		47.6		50.5	
Sound[e]	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	437 + 540 + 672		437 + 540 + 672		437 + (672 x2)	
	Shipping Weight		lbs.	472 + 582 + 714		472 + 582 + 714		472 + (714 x2)	
	Net Dimensions (WxHxD)		inches	34.65 x 66.73 x 30.12 + (50.98 x 66.73 x 30.12) x2		34.65 x 66.73 x 30.12 + (50.98 x 66.73 x 30.12) x2		34.65 x 66.73 x 30.12 + (50.98 x 66.73 x 30.12) x2	
	Shipping Dimensions (WxHxD)		inches	37.32 x 75.28 x 32.76 + (53.66 x 75.28 x 32.76) x2		37.32 x 75.28 x 32.76 + (53.66 x 75.28 x 32.76) x2		37.32 x 75.28 x 32.76 + (53.66 x 75.28 x 32.76) x2	
Operating Temp Range	Cooling		°F	23 ~ 120		23 ~ 120		23 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires two 4TDK3819B0000A outdoor unit T-joint connections

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions (published ratings apply to systems < 300,000 Btuh).
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.

Table 18. 460V Heat Pump Triple Modules II

Model Name				4TVH0384B400NB		4TVH0408B400NB		4TVH0432B400NB	
				2x 4TVH0120B400NB + 4TVH0144B400NB		4TVH0120B400NB + 2x 4TVH0144B400NB		3x 4TVH0144B400NB	
Power Supply				460/60/3		460/60/3		460/60/3	
Performance	Nominal Tons			32.0		34.0		36.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)[a]	Cooling	Btuh	384,000	384,000	408,000	408,000	432,000	432,000
		Heating	Btuh	432,000	432,000	459,000	459,000	486,000	486,000
	Capacity (Rated)[b]	Cooling	Btuh	366,000	366,000	390,000	390,000	415,000	415,000
		High Temp Heating	Btuh	410,000	410,000	435,000	435,000	460,000	460,000
		Low Temp Heating	Btuh	268,000	268,000	284,000	284,000	300,000	300,000
	AHRI -1230 Efficiency Ratings[b]	EER	-	9.50	9.50	9.50	9.50	9.50	9.50
		IEER	-	16.20	19.50	16.30	19.10	16.30	19.10
		COP @ 47°F	-	3.20	3.20	3.20	3.20	3.20	3.20
		COP @ 17°F	-	2.05	2.10	2.05	2.05	2.05	2.05
		SCHE	-	-	-	-	-	-	-
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (4)		SSC Scroll (5)		SSC Scroll (6)	
	Model Name		-	DS-GB052FAVASG x 2 + DS-GB066FAVASG x 2		DS-GB052FAVASG x 4 + DS-GB066FAVASG		DS-GB052FAVASG x 6	
	Output		kW	(4.96 x 2) + (6.13 x 2)		(4.96 x 4) + 6.13		4.96 x 6	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	311.1		388.9		466.6	
Fan	Type (Qty.)		-	Propeller (6)		Propeller (6)		Propeller (6)	
	Output (Each)		W	620 x 6		620 x 6		620 x 6	
	Airflow Rate		CFM	(9,180 x2) + 9535		9,180 + (2x 9,535)		9535 x 3	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	3/4" Braze		3/4" Braze		3/4" Braze	
	Gas Pipe		Ø inch	1 5/8" Braze		1 5/8" Braze		1 5/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	N/A		N/A		N/A	
	Installation Limits	Max Length[c]	ft.	656 (722)		656 (722)		656 (722)	
		Max Height[d]	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	64		64		64	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R410A		R410A		R410A	
	Factory Charge		lbs.	51.8		54.7		57.5	
Sound[e]	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	(540 x 2) + 672		540 + (672 x 2)		672 x 3	
	Shipping Weight		lbs.	(582 x 2) + 714		582 + (714 x 2)		714 x 3	
	Net Dimensions (WxHxD)		inches	(50.98 x 66.73 x 30.12) x 3		(50.98 x 66.73 x 30.12) x 3		(50.98 x 66.73 x 30.12) x 3	
	Shipping Dimensions (WxHxD)		inches	(53.66 x 75.28 x 32.76) x 3		(53.66 x 75.28 x 32.76) x 3		(53.66 x 75.28 x 32.76) x 3	
Operating Temp Range	Cooling		°F	23 ~ 120		23 ~ 120		23 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires two 4TDK3819B0000A outdoor unit T-joint connections.

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions (published ratings apply to systems $\leq$ 300,000 Btuh).
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.

Table 19. 460V Heat Recovery Single Modules

Model Name				4TVR0072B400NB		4TVR0096B400NB		4TVR0120B400NB		4TVR0144B400NB	
Power Supply				460/60/3		460/60/3		460/60/3		460/60/3	
Performance	Nominal Tons			6.0		8.0		10.0		12.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)[a]	Cooling	Btuh	72,000	72,000	96,000	96,000	120,000	120,000	144,000	144,000
		Heating	Btuh	81,000	81,000	108,000	108,000	135,000	135,000	162,000	162,000
	Capacity (Rated)[b]	Cooling	Btuh	69,000	69,000	92,000	92,000	114,000	114,000	138,000	138,000
		High Temp Heating	Btuh	77,000	77,000	103,000	103,000	129,000	129,000	154,000	154,000
		Low Temp Heating	Btuh	51,000	51,000	67,000	67,000	84,000	84,000	100,000	100,000
	AHRI -1230 Efficiency Ratings[b]	EER	-	11.50	12.90	11.50	13.90	11.10	12.40	10.80	11.20
		IEER	-	22.50	33.00	22.40	29.60	21.20	27.10	21.10	24.50
		COP @ 47°F	-	3.46	4.15	3.56	4.23	3.43	3.97	3.54	3.64
		COP @ 17°F	-	2.49	2.75	2.45	2.81	2.44	2.53	2.23	2.40
		SCHE	-	26.00	28.00	26.50	31.50	25.50	30.00	25.00	27.50
Power	MCA		A	16.4		19		21.7		26.4	
	MOP		A	20		25		30		40	
	SCCR		kA	-		-		-		-	
Compressor	Type (Qty.)		-	SSC Scroll (1)		SSC Scroll (1)		SSC Scroll (1)		SSC Scroll (2)	
	Model Name		-	DS-GB052FAVASG		DS-GB066FAVASG		DS-GB066FAVASG		DS-GB052FAVASG	
	Output		kW	4.96		6.13		6.13		4.96 x 2	
	Oil	Type	-	PVE		PVE		PVE		PVE	
		Initial Charge	fl. oz.	77.8		77.8		77.8		155.5	
Fan	Type (Qty.)		-	Propeller (1)		Propeller (2)		Propeller (2)		Propeller (2)	
	Output (Each)		W	400		620		620		620	
	Airflow Rate		CFM	7,240		9,180		9,180		9,535	
	External Static Pressure		in. WG	0.31		0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	3/8" Braze		3/8" Braze		1/2" Braze		1/2" Braze	
	Gas Pipe		Ø inch	3/4" Braze		7/8" Braze		1 1/8" Braze		1 1/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	5/8" Braze		3/4" Braze		7/8" Braze		7/8" Braze	
	Installation Limits	Max Length[c]	ft.	656 (722)		656 (722)		656 (722)		656 (722)	
		Max Height[d]	ft.	361 (131)		361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	12		16		20		25	
	Total Capacity		-	50 to 130% of total outdoor unit capacity							
Refrigerant	Type		-	R-410A		R-410A		R-410A		R-410A	
	Factory Charge		lbs.	12.1		16.3		16.3		19.18	
Sound[e]	Sound Pressure		dB(A)	60.0		61.0		61.0		62.0	
	Sound Power		dB(A)	81		81		81		83	
External Dimensions	Net Weight		lbs.	445		553		553		692	
	Shipping Weight		lbs.	481		595		595		734	
	Net Dimensions (WxHxD)		inches	34.65 x 66.73 x 30.12		50.98 x 66.73 x 30,12		50.98 x 66.73 x 30,12		50.98 x 66.73 x 30.12	
	Shipping Dimensions (WxHxD)		inches	37.32 x 75.28 x 32.76		53.66 x 75.28 x 32.76		53.66 x 75.28 x 32.76		53.66 x 75.28 x 32.76	
Operating Temp Range	Cooling[f]		°F	5 ~ 120		5 ~ 120		5 ~ 120		5 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75		-13 ~ 75	

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions.
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.
(f) Cooling operation between 23° F and 5° F requires mixed mode condition (at least 50% of the indoor units must be in heating mode).

Table 20. 460V Heat Recovery Dual Modules I

Model Name				4TVR0168B400NB		4TVR0192B400NB		4TVR0216B400NB	
				4TVR0072B400NB + 4TVR0096B400NB		4TVR0072B400NB + 4TVR0120B400NB		4TVR0072B400NB + 4TVR0144B400NB	
Power Supply				460/60/3		460/60/3		460/60/3	
Performance	Nominal Tons			14.0		16.0		18.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)(a)	Cooling	Btuh	168,000	168,000	192,000	192,000	216,000	216,000
		Heating	Btuh	189,000	189,000	216,000	216,000	243,000	243,000
	Capacity (Rated)(b)	Cooling	Btuh	160,000	160,000	184,000	184,000	206,000	206,000
		High Temp Heating	Btuh	180,000	180,000	206,000	206,000	230,000	230,000
		Low Temp Heating	Btuh	118,000	118,000	134,000	134,000	150,000	150,000
	AHRI -1230 Efficiency Ratings(b)	EER	-	11.30	12.10	10.90	11.20	10.60	10.80
		IEER	-	20.50	25.30	21.50	24.20	20.50	22.40
		COP @ 47°F	-	3.44	3.94	3.34	3.83	3.34	3.63
		COP @ 17°F	-	2.43	2.65	2.42	2.59	2.31	2.52
		SCHE	-	23.50	27.00	23.50	26.50	23.00	25.50
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (2)		SSC Scroll (2)		SSC Scroll (2)	
	Model Name		-	DS-GB052FAVASG + DS-GB066FAVASG		DS-GB052FAVASG + DS-GB066FAVASG		DS-GB052FAVASG x 2	
	Output		kW	4.96 + 6.13		4.96 + 6.13		4.96 x 3	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	155.5		155.5		233.3	
Fan	Type (Qty.)		-	Propeller (3)		Propeller (3)		Propeller (3)	
	Output (Each)		W	400 + 620 x 2		400 + 620 x 2		400 + 620 x 2	
	Airflow Rate		CFM	7,240 + 9,180		7,240 + 9,180		7,240 + 9,535	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	5/8" Braze		5/8" Braze		5/8" Braze	
	Gas Pipe		Ø inch	1 1/8" Braze		1 1/8" Braze		1 1/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	7/8" Braze		1 1/8" Braze		1 1/8" Braze	
	Installation Limits	Max Length(c)	ft.	656 (722)		656 (722)		656 (722)	
		Max Height(d)	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	29		33		37	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R-410A		R-410A		R-410A	
	Factory Charge		lbs.	28.4		28.4		31.3	
Sound(e)	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	445 + 553		445 + 553		445 + 692	
	Shipping Weight		lbs.	481 + 595		481 + 595		481 + 734	
	Net Dimensions (WxHxD)		inches	34.65 x 66.73 x 30.12 + 50.98 x 66.73 x 30.12		34.65 x 66.73 x 30.12 + 50.98 x 66.73 x 30.12		34.65 x 66.73 x 30.12 + 50.98 x 66.73 x 30.12	
	Shipping Dimensions (WxHxD)		inches	37.32 x 75.28 x 32.76 + 53.66 x 75.28 x 32.76		37.32 x 75.28 x 32.76 + 53.66 x 75.28 x 32.76		37.32 x 75.28 x 32.76 + 53.66 x 75.28 x 32.76	
Operating Temp Range	Cooling(f)		°F	5 ~ 120		5 ~ 120		5 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires 4TDK3819B0000A and 4TDK3100B0000A outdoor unit T-joint connections

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions.
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.
(f) Cooling operation between 23° F and 5° F requires mixed mode condition (at least 50% of the indoor units must be in heating mode).

Table 21. 460V Heat Recovery Dual Modules II

Model Name				4TVR0240B400NB		4TVR0264B400NB		4TVR0288B400NB	
				2x 4TVR0120B400NB		4TVR0120B400NB + 4TVR0144B400NB		2x 4TVR0144B400NB	
Power Supply				460/60/3		460/60/3		460/60/3	
Performance	Nominal Tons			20.0		22.0		24.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)(a)	Cooling	Btuh	240,000	240,000	264,000	264,000	288,000	288,000
		Heating	Btuh	270,000	270,000	297,000	297,000	324,000	324,000
	Capacity (Rated)(b)	Cooling	Btuh	228,000	228,000	252,000	252,000	276,000	276,000
		High Temp Heating	Btuh	258,000	258,000	282,000	282,000	308,000	308,000
		Low Temp Heating	Btuh	168,000	168,000	184,000	184,000	200,000	200,000
	AHRI -1230 Efficiency Ratings(b)	EER	-	10.60	10.70	10.10	10.10	10.00	9.90
		IEER	-	18.50	22.10	18.50	21.50	18.60	21.00
		COP @ 47°F	-	3.24	3.65	3.25	3.45	3.25	3.26
		COP @ 17°F	-	2.40	2.54	2.26	2.41	2.12	2.29
		SCHE	-	22.50	25.50	22.00	24.50	21.50	23.50
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (2)		SSC Scroll (3)		SSC Scroll (4)	
	Model Name		-	DS-GB066FAVASG x 2		DS-GB052FAVASG x 2 + DS-GB066FAVASG		DS-GB052FAVASG x 4	
	Output		kW	6.13 x 2		(4.96 x 2) + 6.13		4.96 x 4	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	155.5		233.3		311.1	
Fan	Type (Qty.)		-	Propeller (4)		Propeller (4)		Propeller (4)	
	Output (Each)		W	620 x 4		620 x 4		620 x 4	
	Airflow Rate		CFM	9180 x 2		9,180 + 9,535		9535 x 2	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	5/8" Braze		3/4" Braze		3/4" Braze	
	Gas Pipe		Ø inch	1 1/8" Braze		1 3/8" Braze		1 3/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	1 1/8" Braze		1 1/8" Braze		1 1/8" Braze	
	Installation Limits	Max Length(c)	ft.	656 (722)		656 (722)		656 (722)	
		Max Height(d)	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	41		45		49	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R-410A		R-410A		R-410A	
	Factory Charge		lbs.	32.6		35.5		38.4	
Sound(e)	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	553 x 2		553 + 692		692 x 2	
	Shipping Weight		lbs.	595 x 2		595 + 734		734 x 2	
	Net Dimensions (WxHxD)		inches	(50.98 x 66.73 x 30.12) x 2		(50.98 x 66.73 x 30.12) x 2		(50.98 x 66.73 x 30.12) x 2	
	Shipping Dimensions (WxHxD)		inches	(53.66 x 75.28 x 32.76) x 2		(53.66 x 75.28 x 32.76) x 2		(53.66 x 75.28 x 32.76) x 2	
Operating Temp Range	Cooling(f)		°F	5 ~ 120		5 ~ 120		5 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires 4TDK3819B0000A and 4TDK3100B0000A outdoor unit T-joint connections

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions.
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.
(f) Cooling operation between 23° F and 5° F requires mixed mode condition (at least 50% of the indoor units must be in heating mode).

Table 22. 460V Heat Recovery Triple Modules I

Model Name				4TVR0312B400NB		4TVR0336B400NB		4TVR0360B400NB	
				4TVR0072B400NB + 4TVR0096B400NB + 4TVR0144B400NB		4TVR0072B400NB + 4TVR0120B400NB + 4TVR0144B400NB		4TVR0072B400NB + 2x 4TVR0144B400NB	
Power Supply				460/60/3		460/60/3		460/60/3	
Performance	Nominal Tons			26.0		28.0		30.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)(a)	Cooling	Btuh	312,000	312,000	336,000	336,000	360,000	360,000
		Heating	Btuh	351,000	351,000	378,000	378,000	405,000	405,000
	Capacity (Rated)(b)	Cooling	Btuh	298,000	298,000	320,000	320,000	344,000	344,000
		High Temp Heating	Btuh	334,000	334,000	360,000	360,000	386,000	386,000
		Low Temp Heating	Btuh	218,000	218,000	234,000	234,000	250,000	250,000
	AHRI -1230 Efficiency Ratings(b)	EER	-	10.30	10.60	10.00	10.20	9.80	9.80
		IEER	-	18.10	20.90	17.00	20.50	16.60	20.00
		COP @ 47°F	-	3.20	3.38	3.20	3.27	3.20	3.22
		COP @ 17°F	-	2.25	2.51	2.21	2.39	2.11	2.31
		SCHE	-	20.50	23.50	20.50	23.10	20.00	22.40
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (4)		SSC Scroll (4)		SSC Scroll (5)	
	Model Name		-	DS-GB052FAVASG x 3 + DS-GB066FAVASG		DS-GB052FAVASG x 3 + DS-GB066FAVASG		DS-GB052FAVASG x 5	
	Output		kW	(4.96 x 3) + 6.13		(4.96 x 3) + 6.13		4.96 x 5	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	311.1		311.1		388.9	
Fan	Type (Qty.)		-	Propeller (5)		Propeller (5)		Propeller (5)	
	Output (Each)		W	400 + 620 x 4		400 + 620 x 4		400 + 620 x 4	
	Airflow Rate		CFM	7,240 + 9,180 + 9,535		7,240 + 9,180 + 9,535		7,240 + (9,535 x2)	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	3/4" Braze		3/4" Braze		3/4" Braze	
	Gas Pipe		Ø inch	1 3/8" Braze		1 3/8" Braze		1 5/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	1 1/8" Braze		1 1/8" Braze		1 3/8" Braze	
	Installation Limits	Max Length(c)	ft.	656 (722)		656 (722)		656 (722)	
		Max Height(d)	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	54		58		62	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R-410A		R-410A		R-410A	
	Factory Charge		lbs.	47.6		47.6		50.5	
Sound(e)	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	445 + 553 + 692		445 + 553 + 692		445 + (692 x 2)	
	Shipping Weight		lbs.	481 + 595 + 734		481 + 595 + 734		481 + (734 x 2)	
	Net Dimensions (WxHxD)		inches	34.65 x 66.73 x 30.12 + (50.98 x 66.73 x 30.12) x2		34.65 x 66.73 x 30.12 + (50.98 x 66.73 x 30.12) x2		34.65 x 66.73 x 30.12 + (50.98 x 66.73 x 30.12) x2	
	Shipping Dimensions (WxHxD)		inches	37.32 x 75.28 x 32.76 + (53.66 x 75.28 x 32.76) x2		37.32 x 75.28 x 32.76 + (53.66 x 75.28 x 32.76) x2		37.32 x 75.28 x 32.76 + (53.66 x 75.28 x 32.76) x2	
Operating Temp Range	Cooling(f)		°F	5 ~ 120		5 ~ 120		5 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires two each 4TDK3819B0000A and 4TDK3100B0000A outdoor unit T-joint connections

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions (published ratings apply to systems < 300,000 Btuh).
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.
(f) Cooling operation between 23° F and 5° F requires mixed mode condition (at least 50% of the indoor units must be in heating mode).

Table 23. 460V Heat Recovery Triple Modules II

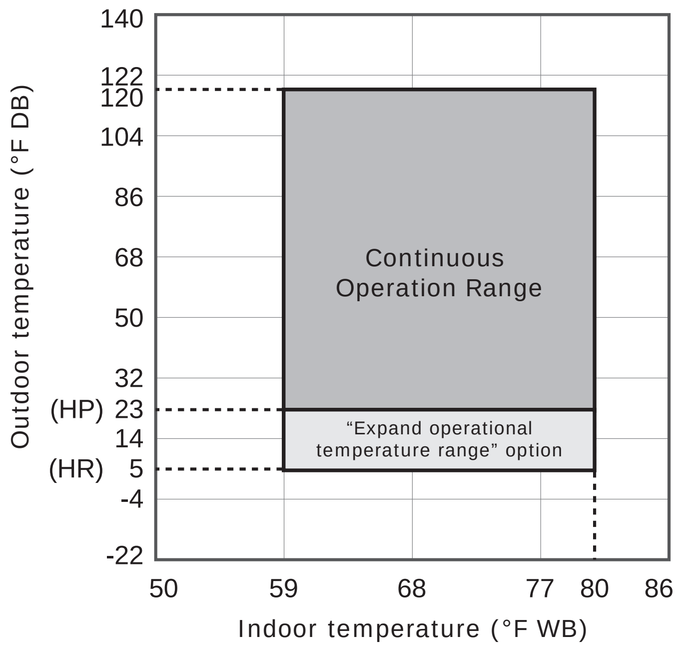
Model Name				4TVR0384B400NB		4TVR0408B400NB		4TVR0432B400NB	
				2x 4TVR0120B400NB + 4TVR0144B400NB		4TVR0120B400NB + 2x 4TVR0144B400NB		3x 4TVR0144B400NB	
Power Supply				460/60/3		460/60/3		460/60/3	
Performance	Nominal Tons			32.0		34.0		36.0	
	System Type			Ducted	Non-Ducted	Ducted	Non-Ducted	Ducted	Non-Ducted
	Capacity (Nominal)[(a)]	Cooling	Btuh	384,000	384,000	408,000	408,000	432,000	432,000
		Heating	Btuh	432,000	432,000	459,000	459,000	486,000	486,000
	Capacity (Rated)[(b)]	Cooling	Btuh	366,000	366,000	390,000	390,000	415,000	415,000
		High Temp Heating	Btuh	410,000	410,000	435,000	435,000	460,000	460,000
		Low Temp Heating	Btuh	268,000	268,000	284,000	284,000	300,000	300,000
	AHRI -1230 Efficiency Ratings[(b)]	EER	-	9.50	9.50	9.50	9.50	9.50	9.50
		IEER	-	16.20	19.50	16.30	19.10	16.30	19.10
		COP @ 47°F	-	3.20	3.20	3.20	3.20	3.20	3.20
		COP @ 17°F	-	2.05	2.10	2.05	2.05	2.05	2.05
		SCHE	-	19.50	23.00	19.00	22.00	19.00	21.50
Power	MCA		A	Each individual outdoor unit requires a separate electrical connection. Reference electrical data for each individual outdoor unit.					
	MOP		A						
	SCCR		kA						
Compressor	Type (Qty.)		-	SSC Scroll (4)		SSC Scroll (5)		SSC Scroll (6)	
	Model Name		-	DS-GB052FAVASG x 2 + DS-GB066FAVASG x 2		DS-GB052FAVASG x 4 + DS-GB066FAVASG		DS-GB052FAVASG x 6	
	Output		kW	(4.96 x 2) + (6.13 x 2)		(4.96 x 4) + 6.13		4.96 x 6	
	Oil	Type	-	PVE		PVE		PVE	
		Initial Charge	fl. oz.	311.1		388.9		466.6	
Fan	Type (Qty.)		-	Propeller (6)		Propeller (6)		Propeller (6)	
	Output (Each)		W	620 x 6		620 x 6		620 x 6	
	Airflow Rate		CFM	(9,180 x2) + 9535		9,180 + (2x 9,535)		9535 x 3	
	External Static Pressure		in. WG	0.31		0.31		0.31	
Piping Connections	Liquid Pipe		Ø inch	3/4" Braze		3/4" Braze		3/4" Braze	
	Gas Pipe		Ø inch	1 5/8" Braze		1 5/8" Braze		1 5/8" Braze	
	High Pressure Gas Pipe (For HR)		Ø inch	1 3/8" Braze		1 3/8" Braze		1 3/8" Braze	
	Installation Limits	Max Length[(c)]	ft.	656 (722)		656 (722)		656 (722)	
		Max Height[(d)]	ft.	361 (131)		361 (131)		361 (131)	
Indoor Unit Connections	Number Of Connectable Indoor Units		-	64		64		64	
	Total Capacity		-	50 to 130% of total outdoor unit capacity					
Refrigerant	Type		-	R-410A		R-410A		R-410A	
	Factory Charge		lbs.	51.8		54.7		57.5	
Sound[(e)]	Sound Pressure		dB(A)	-		-		-	
	Sound Power		dB(A)	-		-		-	
External Dimensions	Net Weight		lbs.	553 + (692 x 2)		553 + (692 x 2)		692 x 3	
	Shipping Weight		lbs.	595 + (734 x 2)		595 + (734 x 2)		734 x 3	
	Net Dimensions (WxHxD)		inches	(50.98 x 66.73 x 30.12) x 3		(50.98 x 66.73 x 30.12) x 3		(50.98 x 66.73 x 30.12) x 3	
	Shipping Dimensions (WxHxD)		inches	(53.66 x 75.28 x 32.76) x 3		(53.66 x 75.28 x 32.76) x 3		(53.66 x 75.28 x 32.76) x 3	
Operating Temp Range	Cooling[(f)]		°F	5 ~ 120		5 ~ 120		5 ~ 120	
	Heating		°F	-13 ~ 75		-13 ~ 75		-13 ~ 75	

Note: Requires two each 4TDK3819B0000A and 4TDK3100B0000A outdoor unit T-joint connections

(a) Nominal capacity based on 25 ft. of equivalent refrigerant piping with 0 ft. level difference. Cooling: Indoor temperature 80°F DB, 67°F WB/Outdoor temperature 95°F DB, 75°F WB. Heating: Indoor temperature 70°F DB, 60°F WB/Outdoor temperature 47°F DB, 43°F WB.
(b) Rated per AHRI-1230 Standard conditions.
(c) Actual length (equivalent length in parenthesis).
(d) If the outdoor unit is installed above the indoor units, the allowable height difference to the furthest indoor unit is 361 ft. If the outdoor unit is installed below the below the indoor units, the allowable height difference is 131 ft.
(e) Sound pressure was acquired in a dead room. Actual noise level may be different depending on installation conditions.
(f) Cooling operation between 23° F and 5° F requires mixed mode condition (at least 50% of the indoor units must be in heating mode).

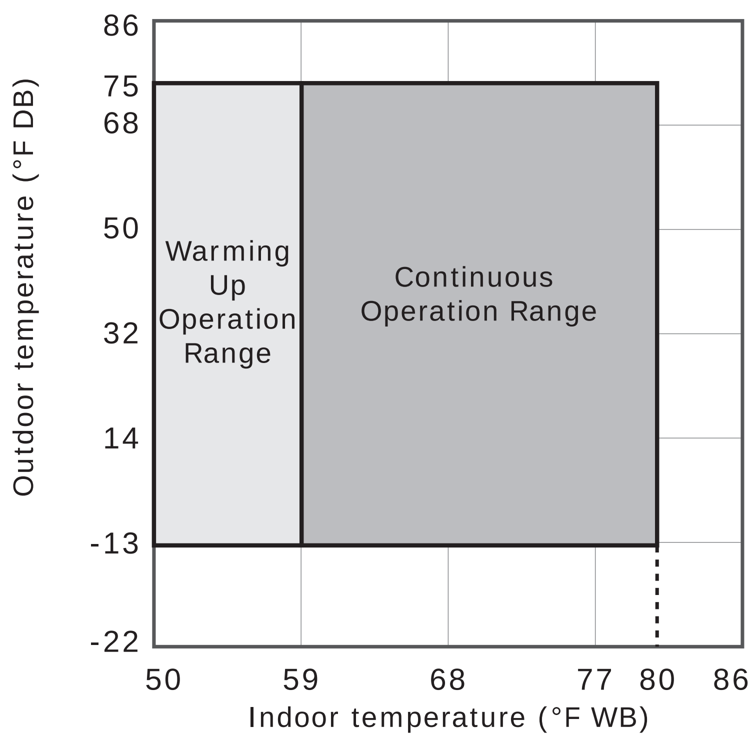
Operation Limit - Outdoor Units

Figure 1. Cooling[(a)]



(a)Extend operational temperature range applies to heat recovery systems in mixed mode condition (at least 50% of the indoor units must be in heating mode).

Figure 2. Heating

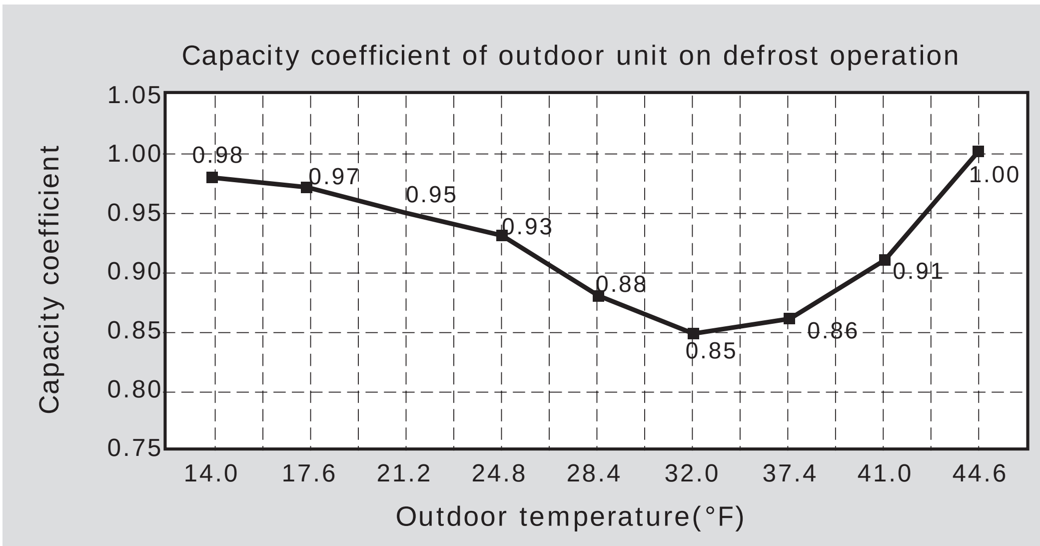


Defrosting Correction Factor

In heating operation, frost can be formed on heat exchanger according to outdoor temperature. (frost on heat exchanger results in decreasing the performance.)To remove frost on heat exchanger of outdoor unit, defrost operation is carried out periodically. During defrost operation, capacity of outdoor unit may decrease. The decrement is not considered to the individual capacity tables.

Outdoor temperature (°F, WB)	14.0	17.6	21.2	24.8	28.4	32.0	37.4	41.0	44.6
Capacity coefficient	0.98	0.97	0.95	0.93	0.88	0.85	0.86	0.91	1.00

Figure 3. Corrected Heating Capacity = Heating Capacity x Capacity coefficient



Electrical Wiring Diagrams - Outdoor Units

Figure 4. Heat Pump - 4TVH0072B300NB, 4TVH0072B400NB

Note 1: Resistance value at 25°C (77°F)

Note 5: Input voltage 460V: Does not apply
Input voltage 208-230V: Apply

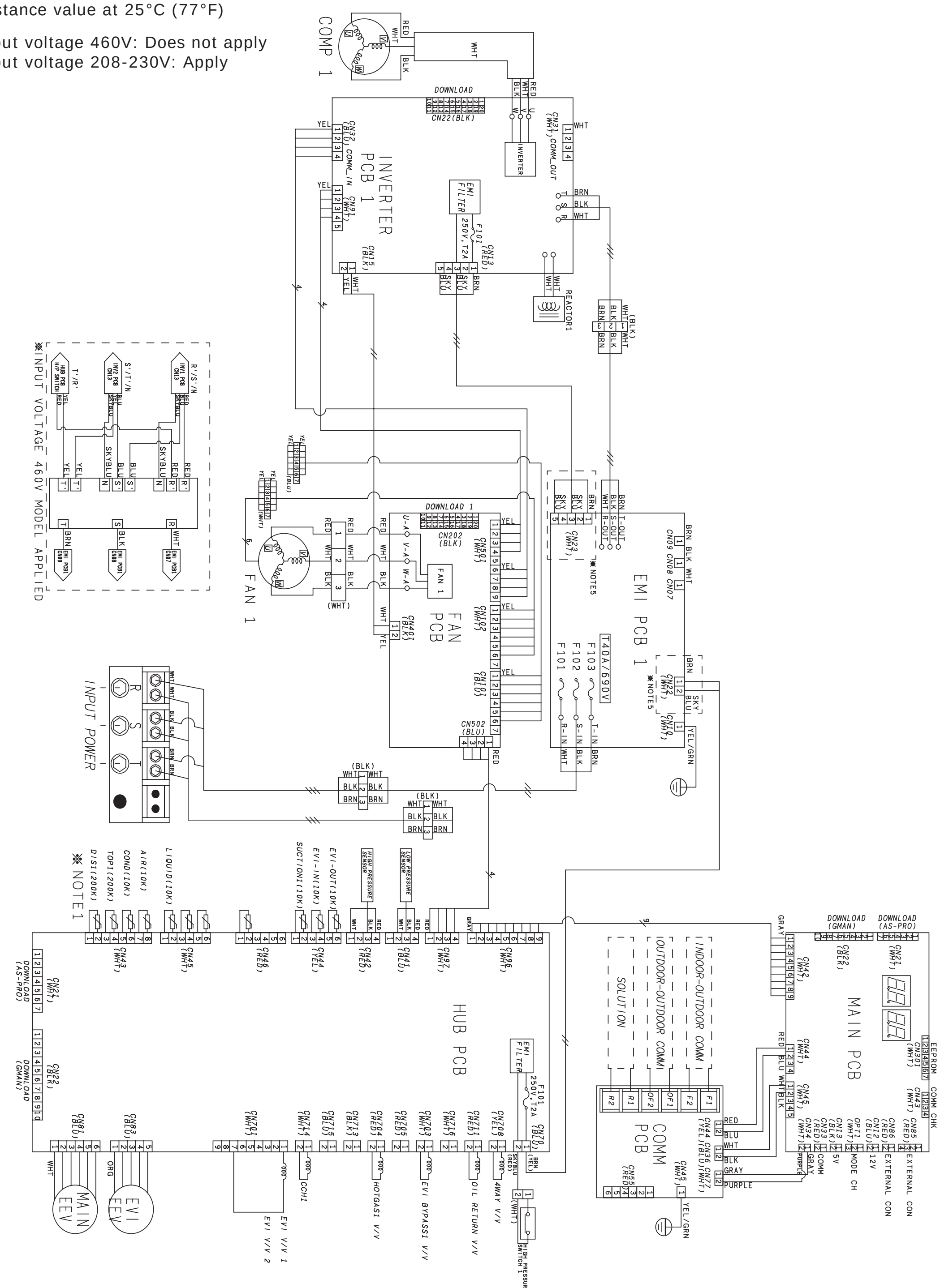


Figure 5. Heat Pump - 4TVH0096B400NB, 4TVH0120B400NB

Note 1: Resistance value at 25°C (77°F)

Note 2: 1 Fan: Does not apply
2 Fan: Apply

Note 5: Input voltage 460V: Does not apply
Input voltage 208-230V: Apply

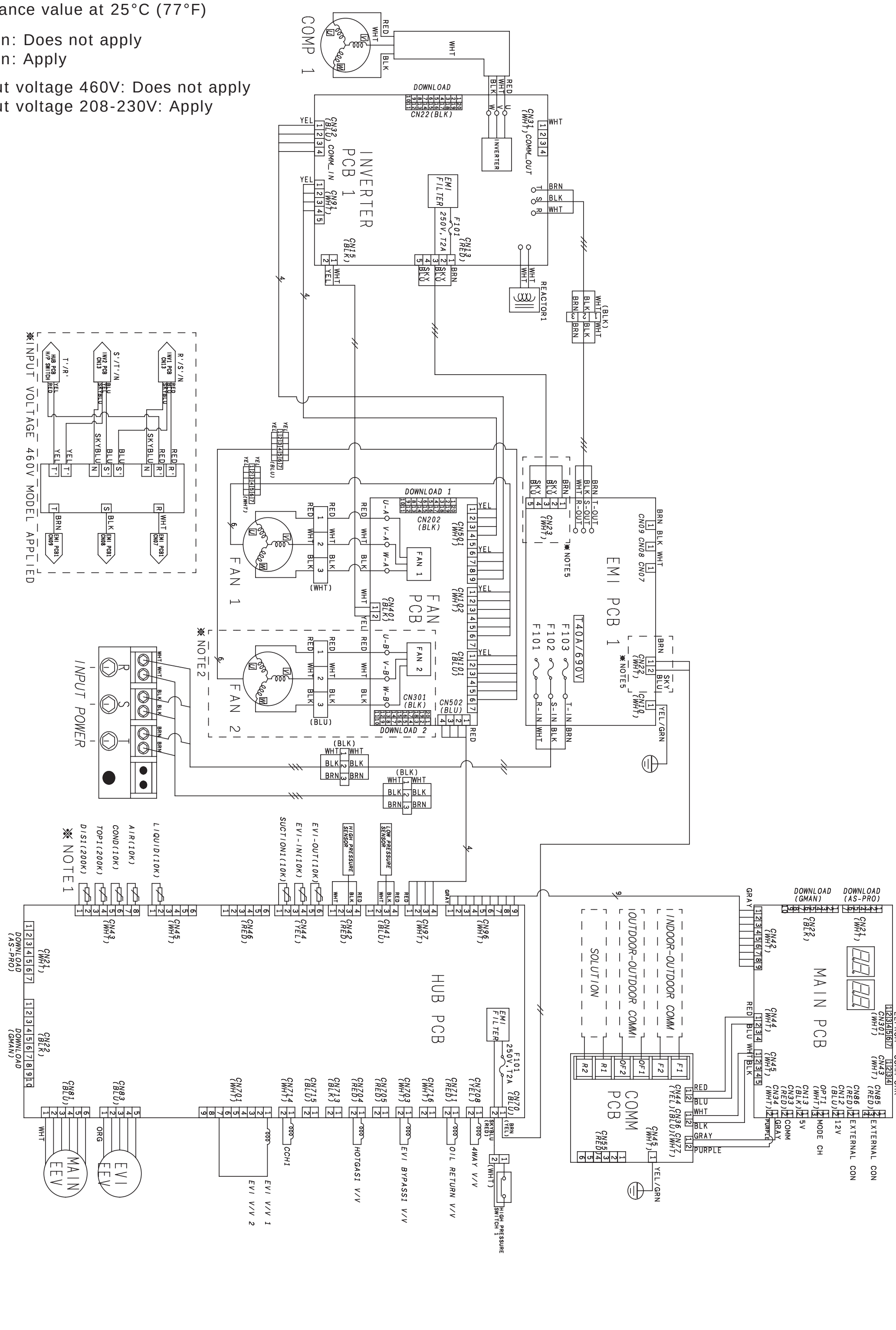


Figure 6. Heat Pump - 4TVH0096B300NB, 4TVH0120B300NB, 4TVH0144B300NB, 4TVH0144B400NB

Note 1: Resistance value at 25°C (77°F)

Note 2: 1 Fan: Does not apply
2 Fan: Apply

Note 3: 1 Comp: Does not apply
2 Comp: Apply

Note 5: Input voltage 460V: Does not apply
Input voltage 208-230V: Apply

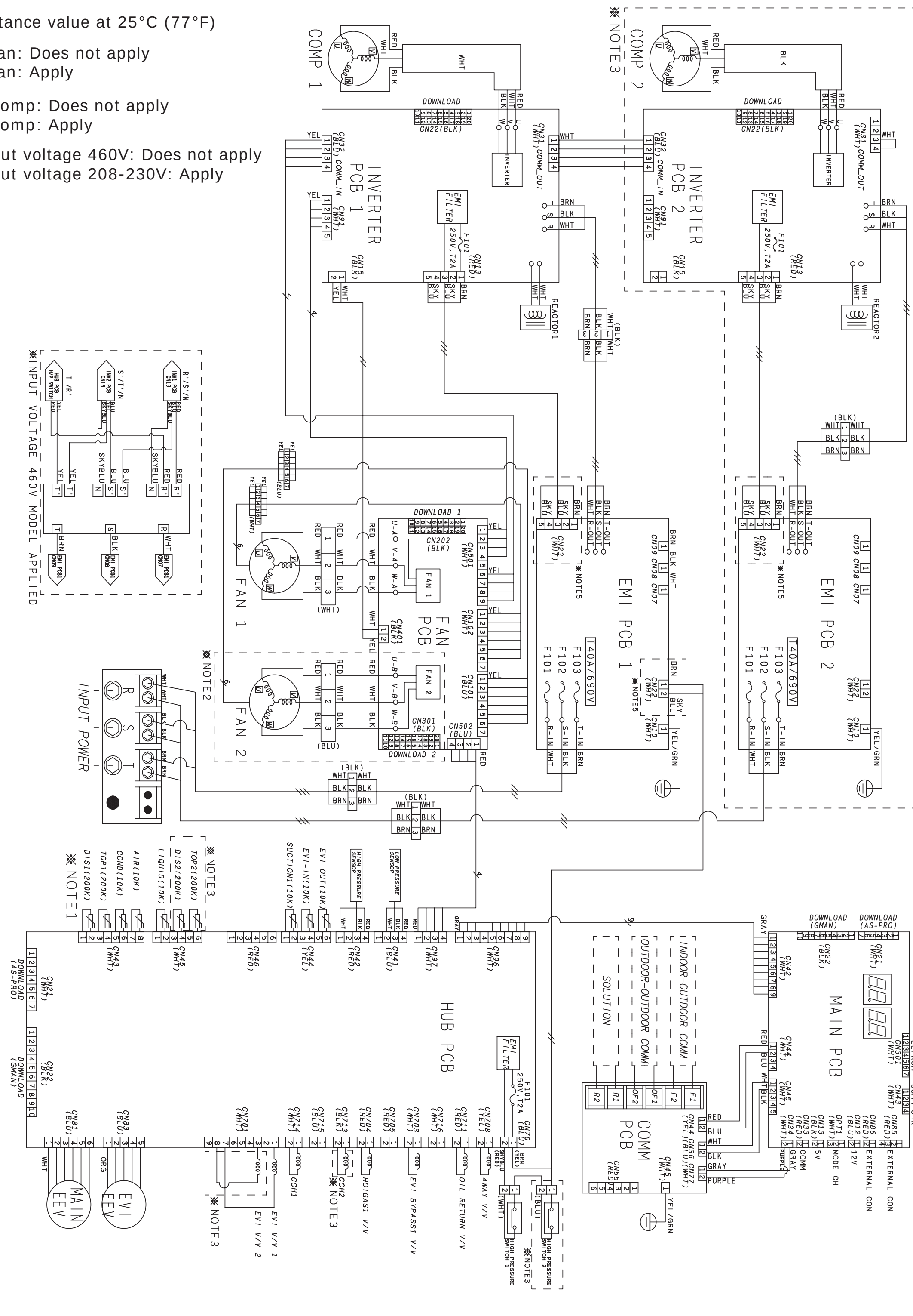


Figure 7. Heat Recovery - 4TVR0072B300NB, 4TVR0072B400NB

Note 1: Resistance value at 25°C (77°F)

Note 4: Heat Pump: Does not apply
Heat Recovery: Apply

Note 5: Input voltage 460V: Does not apply
Input voltage 208-230V: Apply

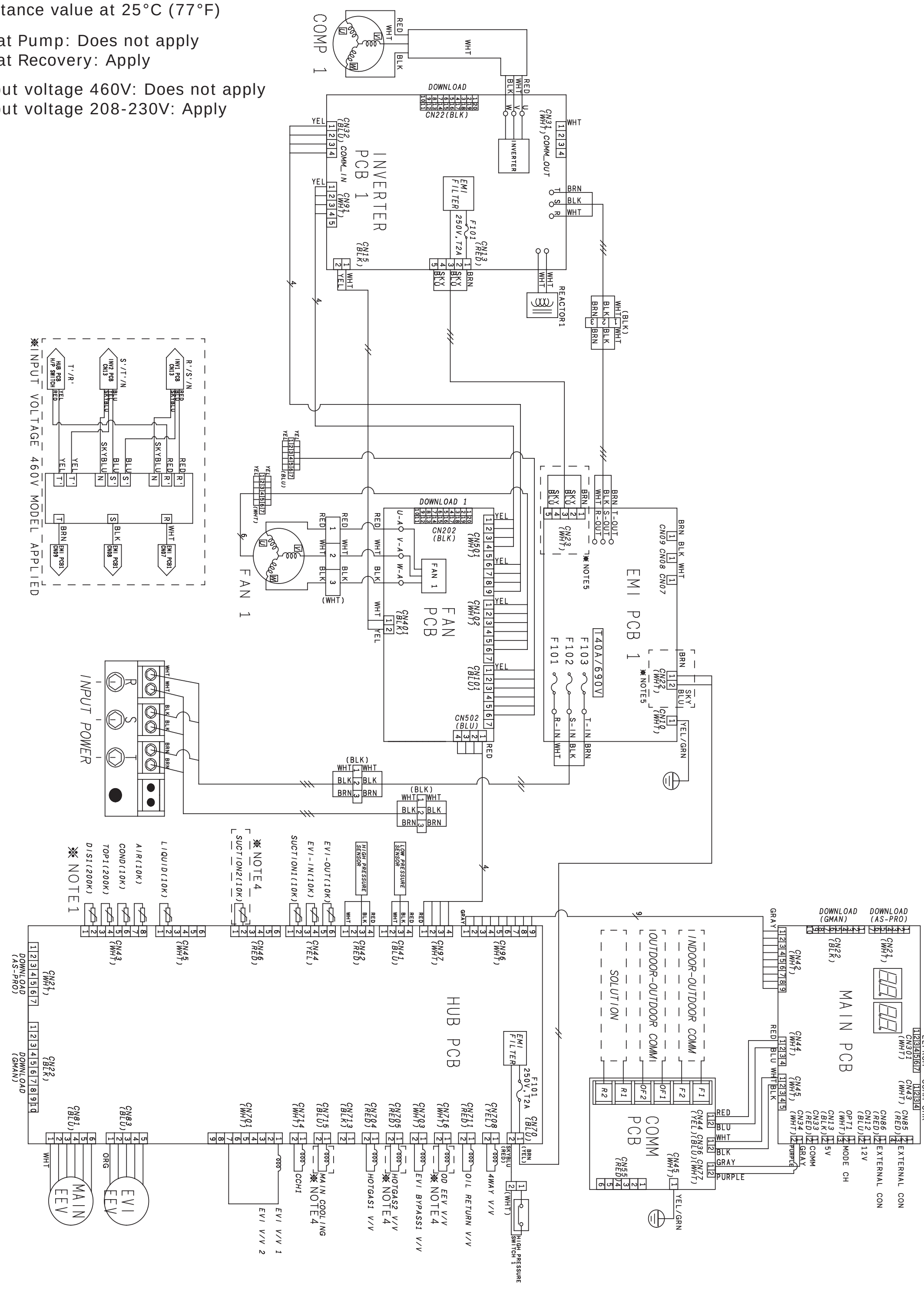


Figure 8. Heat Recovery - 4TVR0096B400NB, 4TVR0120B400NB

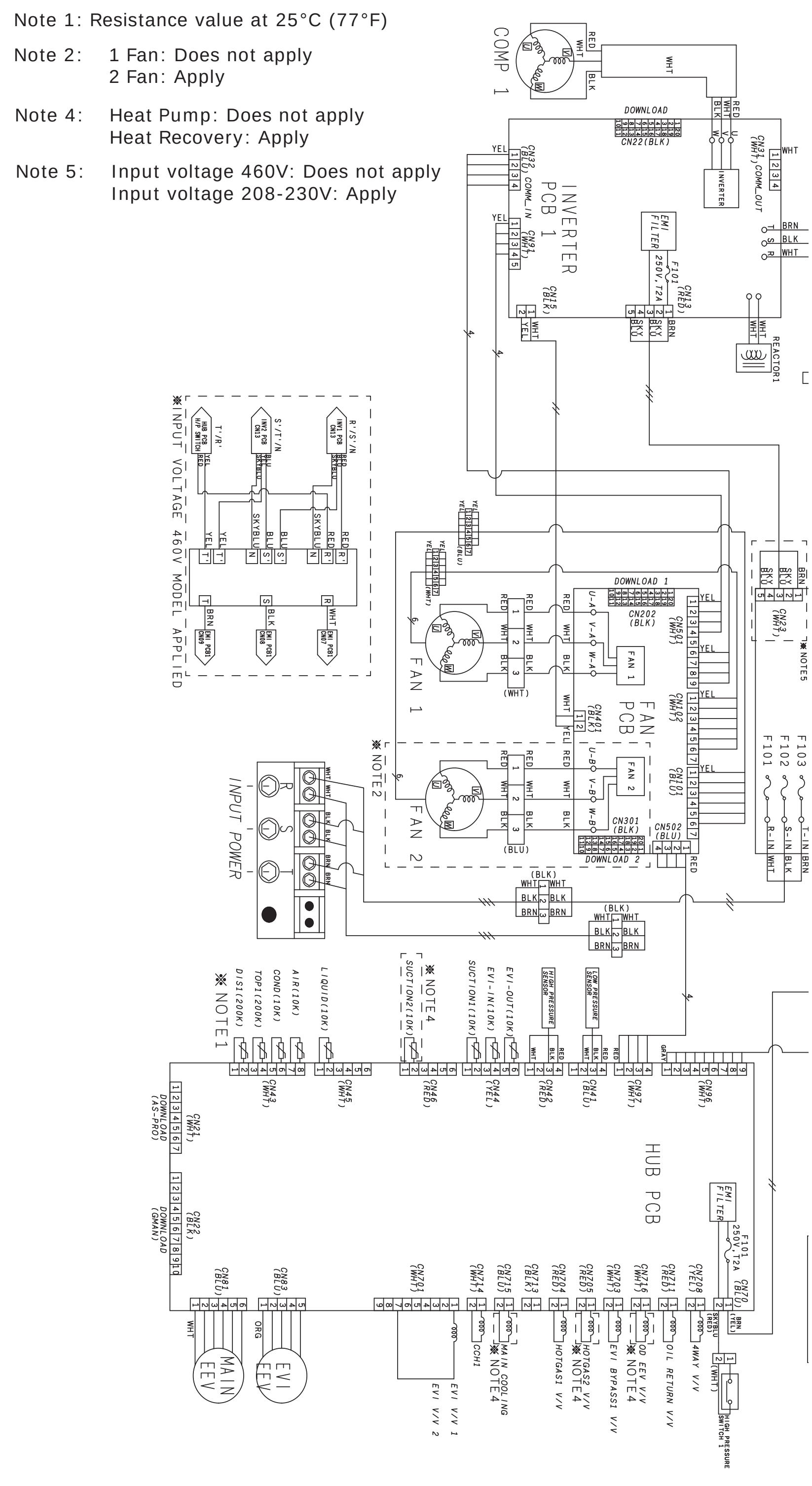


Figure 9. Heat Recovery - 4TVR0096B300NB, 4TVR0120B300NB, 4TVR0144B300NB, 4TVR0144B400NB

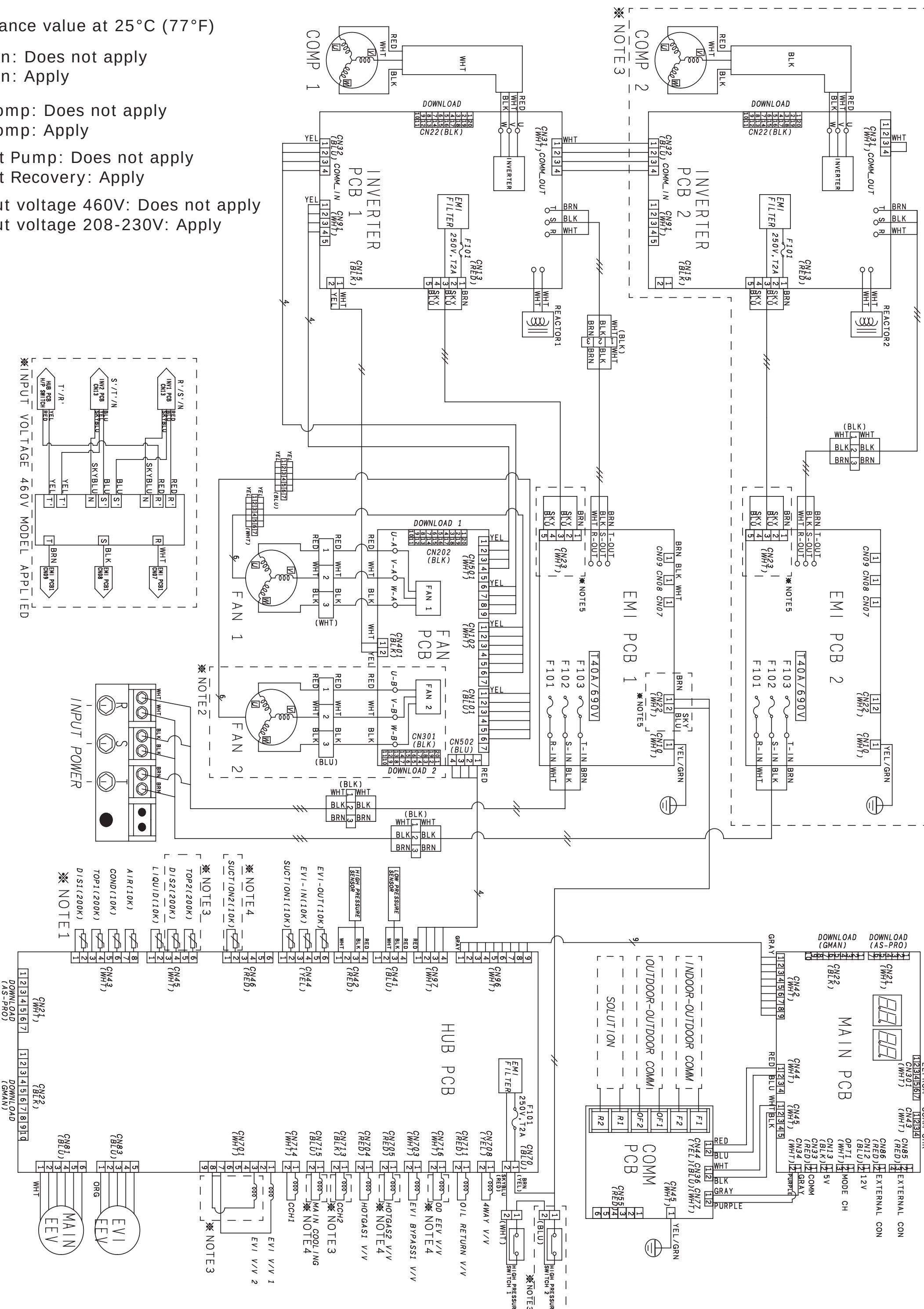
Note 1: Resistance value at 25°C (77°F)

Note 2: 1 Fan: Does not apply
2 Fan: Apply

Note 3: 1 Comp: Does not apply
2 Comp: Apply

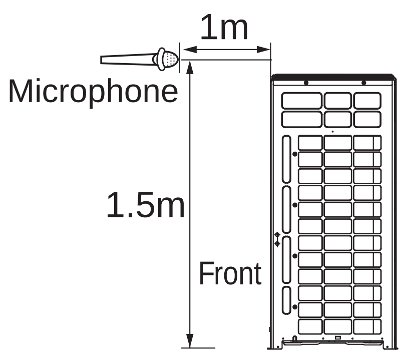
Note 4: Heat Pump: Does not apply
Heat Recovery: Apply

Note 5: Input voltage 460V: Does not apply
Input voltage 208-230V: Apply



Sound Levels - Outdoor Units

Figure 10. Sound Pressure Level



Unit: dB(A)

Model	Pressure
4TVH/R0072B3, 4TVH/R0072B4	60
4TVH/R0096B3, 4TVH/R0120B3	61
4TVH/R0096B4, 4TVH/R0120B4	61
4TVH/R0072B3, 4TVH/R0072B4	60

Notes:

- *Measuring place: Anechoic chamber (conversion value)*
- *These operation values were obtained in an anechoic room. Sound pressure level will vary depending on a range of factors such as the construction of the particular room where the equipment is installed.*
- *Operation sound level may differ depending on operation and ambient conditions.*

NC Curves

Figure 11. 4TVH/R0072B3, 4TVH/R0072B4

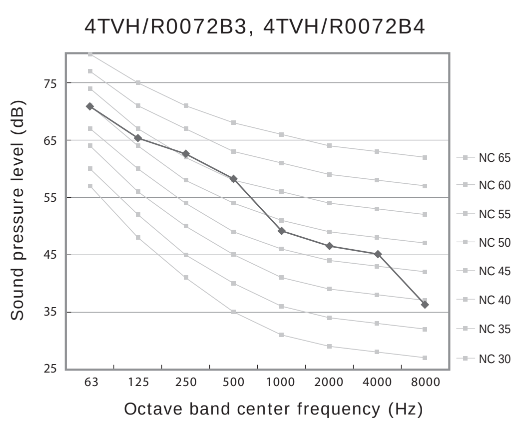


Figure 12. 4TVH/R0096B3, 4TVH/R0120B3

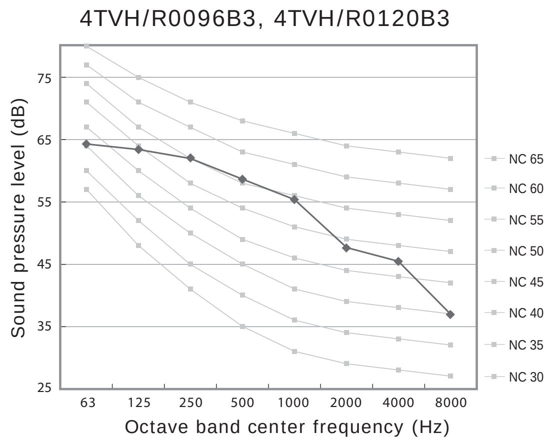


Figure 13. 4TVH/R0096B4, 4TVH/R0120B4

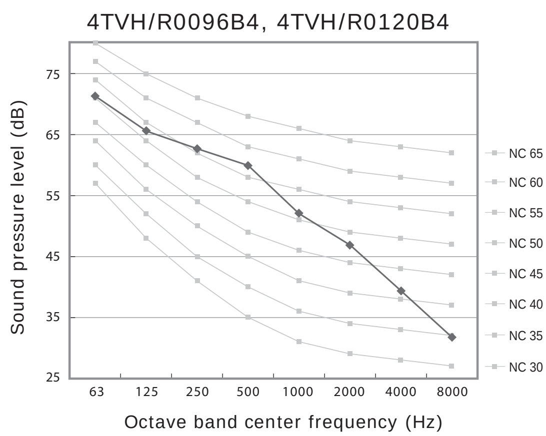
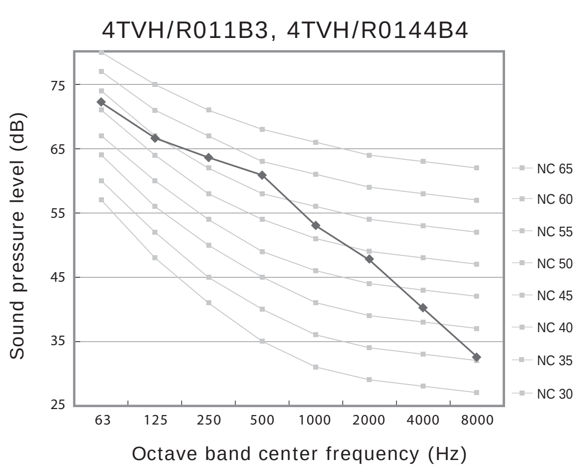


Figure 14. 4TVH/R0144B3, 4TVH/R0144B4



Sound Power

Notes:

- *dBA = A-weighted sound power level.*
- *Reference power: 1pW*
- *Measured according to ISO 3741.*

Unit: dB(A)

Model	Power
4TVH/R0072B3, 4TVH/R0072B4	81
4TVH/R0096B3, 4TVH/R0120B3	81
4TVH/R0096B4, 4TVH/R0120B4	81
4TVH/R0144B3, 4TVH/R0144B4	83

NR Curves

Figure 15. 4TVH/R0072B3, 4TVH/R0072B4

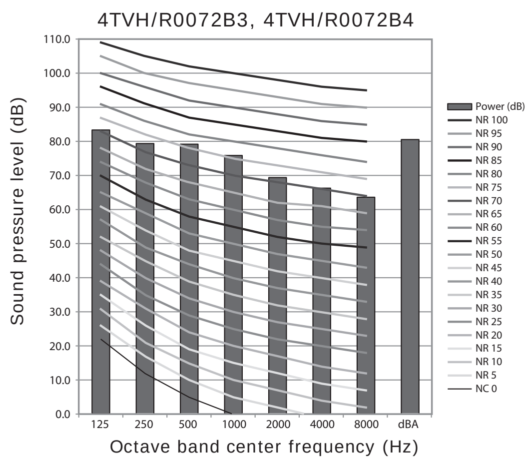


Figure 16. 4TVH/R0096B3, 4TVH/R0120B3

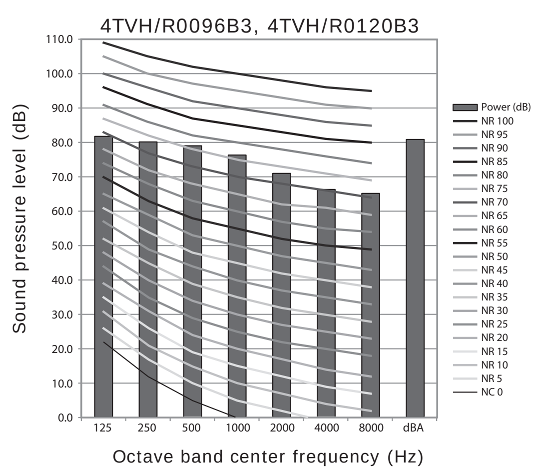


Figure 17. 4TVH/R0096B4, 4TVH/R0120B4

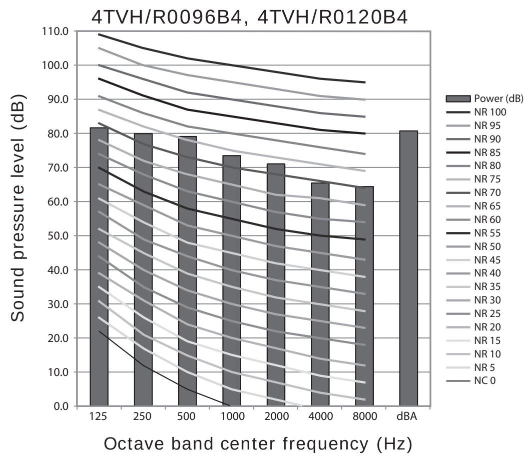
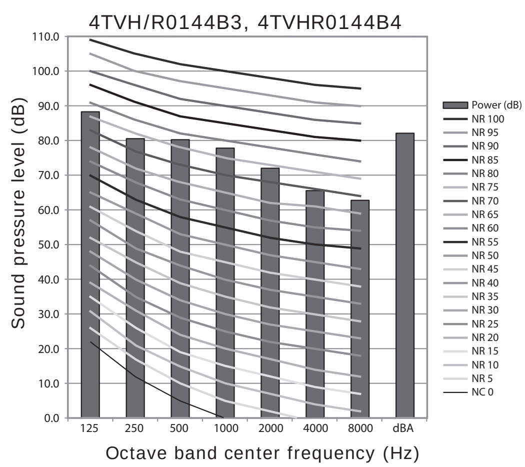


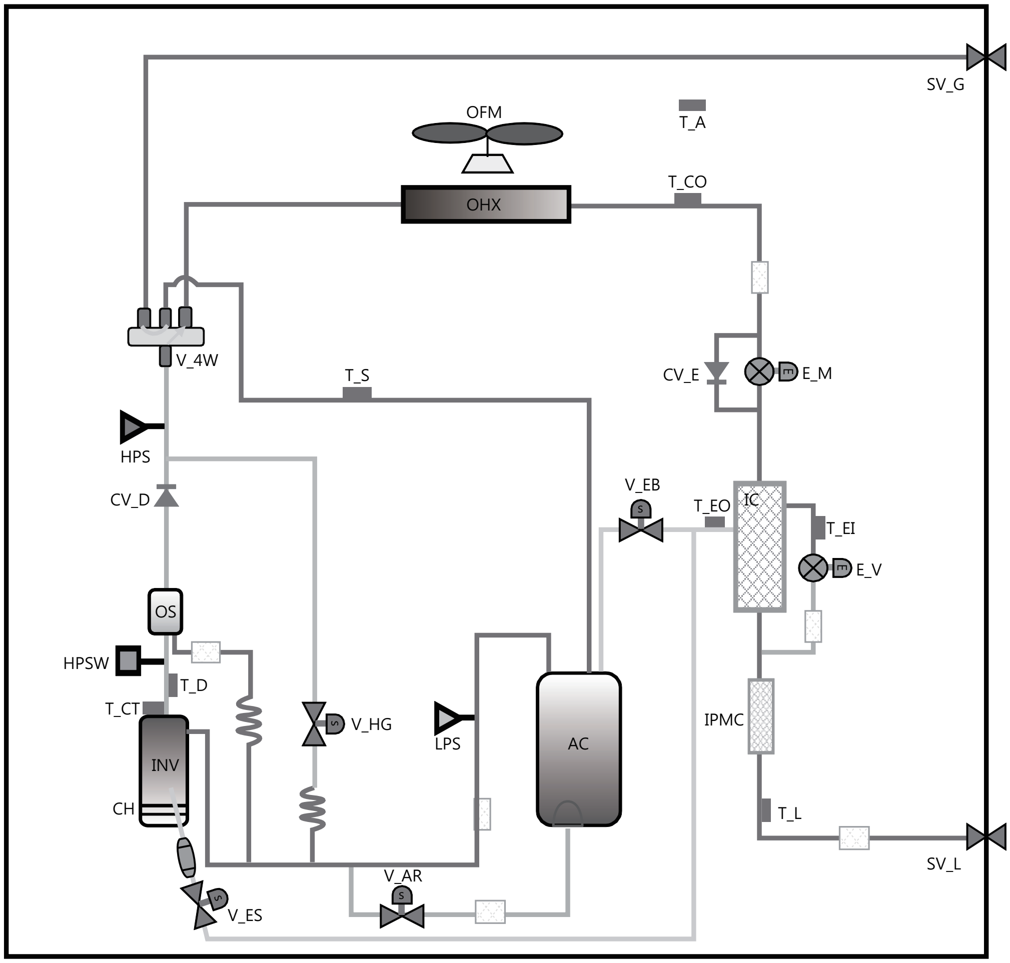
Figure 18. 4TVH/R0144B3, 4TVH/R0144B4



Cycle Diagrams

Parts of Outdoor Unit (HP)

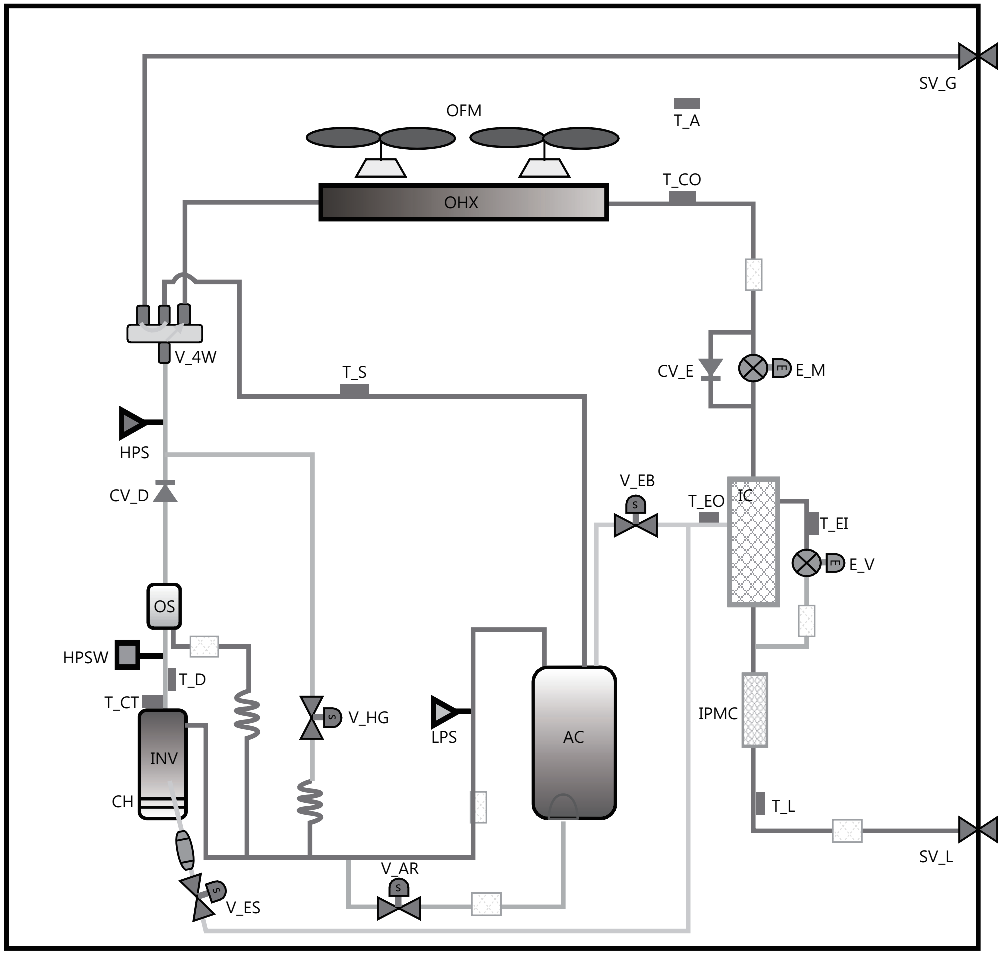
Figure 19. 4TVH0072B300NB, 4TVH0072B400NB



Classification	Description
INV	Inverter Compressor
OFM	Outdoor Fan Motor
OHX	Outdoor Heat Exchanger
AC	Accumulator
OS	Oil Separator
IC	Intercooler
IPMC	IPM Cooler
CH	Crank Case Heater
HPS	High Pressure Sensor
LPS	Low Pressure Sensor
HPSW	High Pressure Switch
E_M	Main EEV
E_EV	EVI EEV
V_ES	EVI Solenoid Valve
V_EB	EVI Bypass Valve

Classification	Description
V_HG	Hot Gas Bypass Valve
V_4W	4way Valve
V_AR	Accumulator Oil Return Valve
CV_E	EEV Bypass Check Valve
CV_D	Discharge Check Valve
T_D	Discharge Temperature Sensor
T_S	Suction Temperature Sensor
T_CO	Condenser Out Temperature Sensor
T_EI	EVI In Temperature Sensor
T_EO	EVI Out Temperature Sensor
T_L	Liquid Tube Temperature Sensor
T_CT	Compressor Top Temperature Sensor
T_A	Ambient Temperature Sensor
SV_G	Gas Pipe Service Valve
SV_L	Liquid Pipe Service Valve

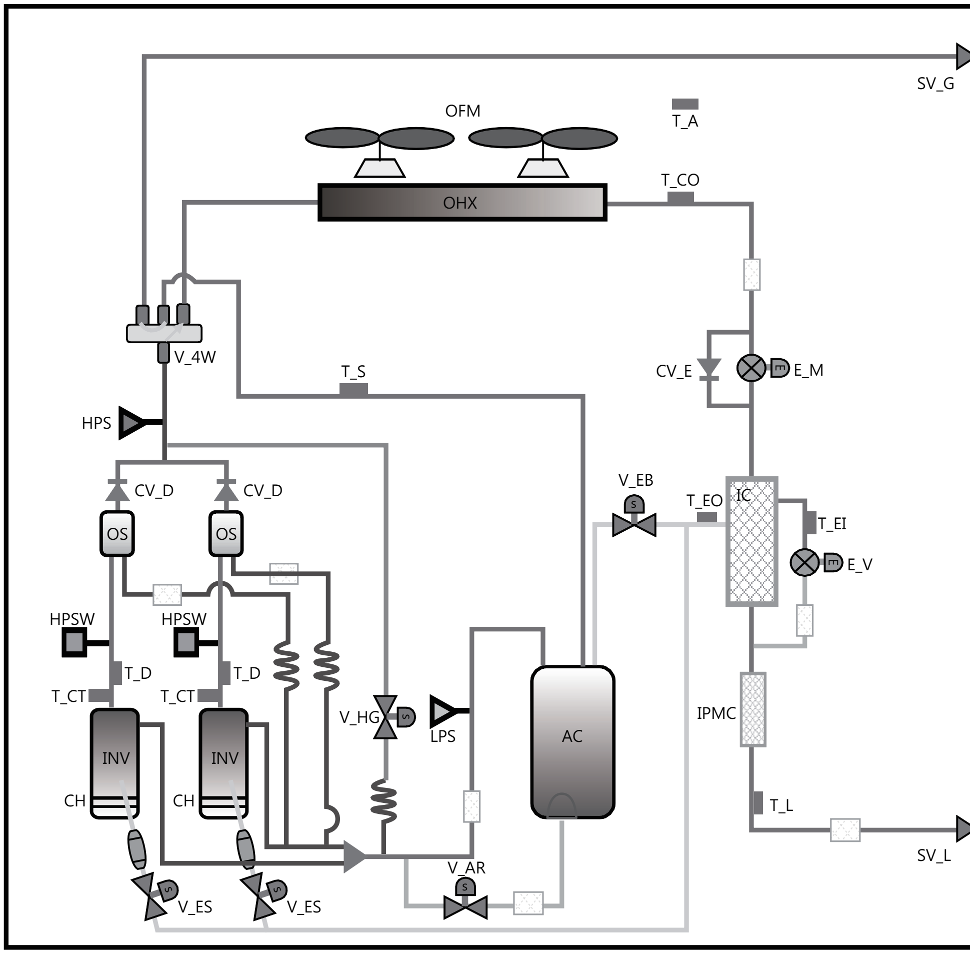
Figure 20. 4TVH0096B400NB, 4TVH0120B400NB



Classification	Description
INV	Inverter Compressor
OFM	Outdoor Fan Motor
OHX	Outdoor Heat Exchanger
AC	Accumulator
OS	Oil Separator
IC	Intercooler
IPMC	IPM Cooler
CH	Crank Case Heater
HPS	High Pressure Sensor
LPS	Low Pressure Sensor
HPSW	High Pressure Switch
E_M	Main EEV
E_EV	EVI EEV
V_ES	EVI Solenoid Valve
V_EB	EVI Bypass Valve

Classification	Description
V_HG	Hot Gas Bypass Valve
V_4W	4way Valve
V_AR	Accumulator Oil Return Valve
CV_E	EEV Bypass Check Valve
CV_D	Discharge Check Valve
T_D	Discharge Temperature Sensor
T_S	Suction Temperature Sensor
T_CO	Condenser Out Temperature Sensor
T_EI	EVI In Temperature Sensor
T_EO	EVI Out Temperature Sensor
T_L	Liquid Tube Temperature Sensor
T_CT	Compressor Top Temperature Sensor
T_A	Ambient Temperature Sensor
SV_G	Gas Pipe Service Valve
SV_L	Liquid Pipe Service Valve

Figure 21. 4TVH0096B300NB, 4TVH0120B300NB, 4TVH0144B300NB, 4TVH0144B400NB

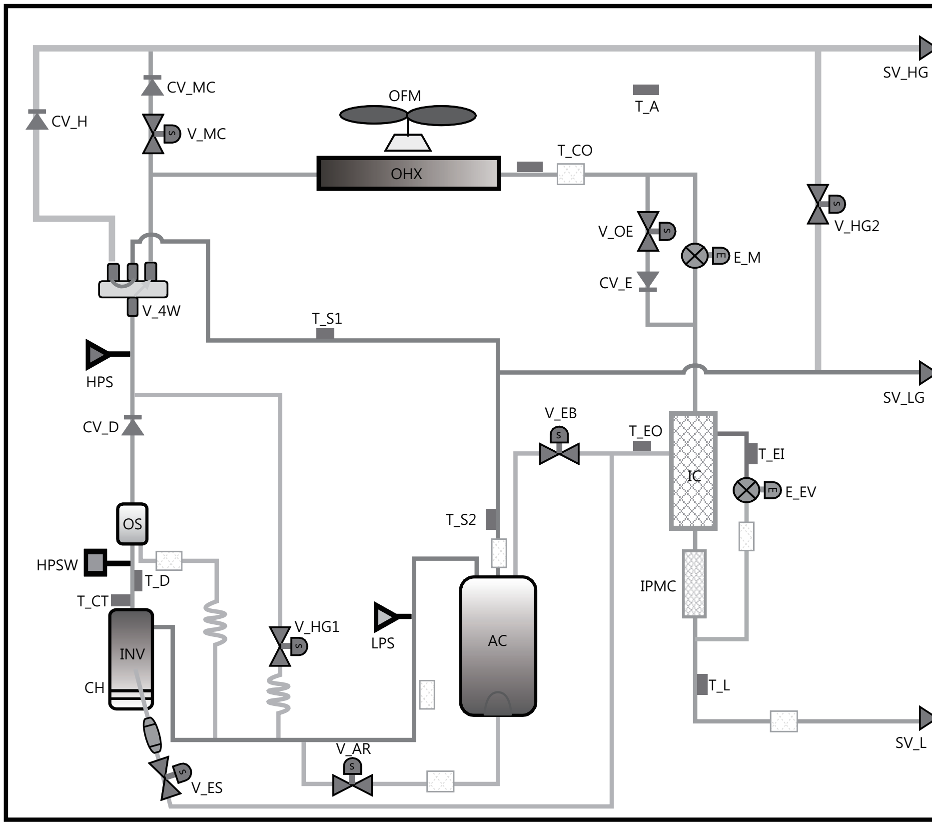


Classification	Description
INV	Inverter Compressor
OFM	Outdoor Fan Motor
OHX	Outdoor Heat Exchanger
AC	Accumulator
OS	Oil Separator
IC	Intercooler
IPMC	IPM Cooler
CH	Crank Case Heater
HPS	High Pressure Sensor
LPS	Low Pressure Sensor
HPSW	High Pressure Switch
E_M	Main EEV
E_EV	EVI EEV
V_ES	EVI Solenoid Valve
V_EB	EVI Bypass Valve

Classification	Description
V_HG	Hot Gas Bypass Valve
V_4W	4way Valve
V_AR	Accumulator Oil Return Valve
CV_E	EEV Bypass Check Valve
CV_D	Discharge Check Valve
T_D	Discharge Temperature Sensor
T_S	Suction Temperature Sensor
T_CO	Condenser Out Temperature Sensor
T_EI	EVI In Temperature Sensor
T_EO	EVI Out Temperature Sensor
T_L	Liquid Tube Temperature Sensor
T_CT	Compressor Top Temperature Sensor
T_A	Ambient Temperature Sensor
SV_G	Gas Pipe Service Valve
SV_L	Liquid Pipe Service Valve

Parts of Outdoor Unit (HR)

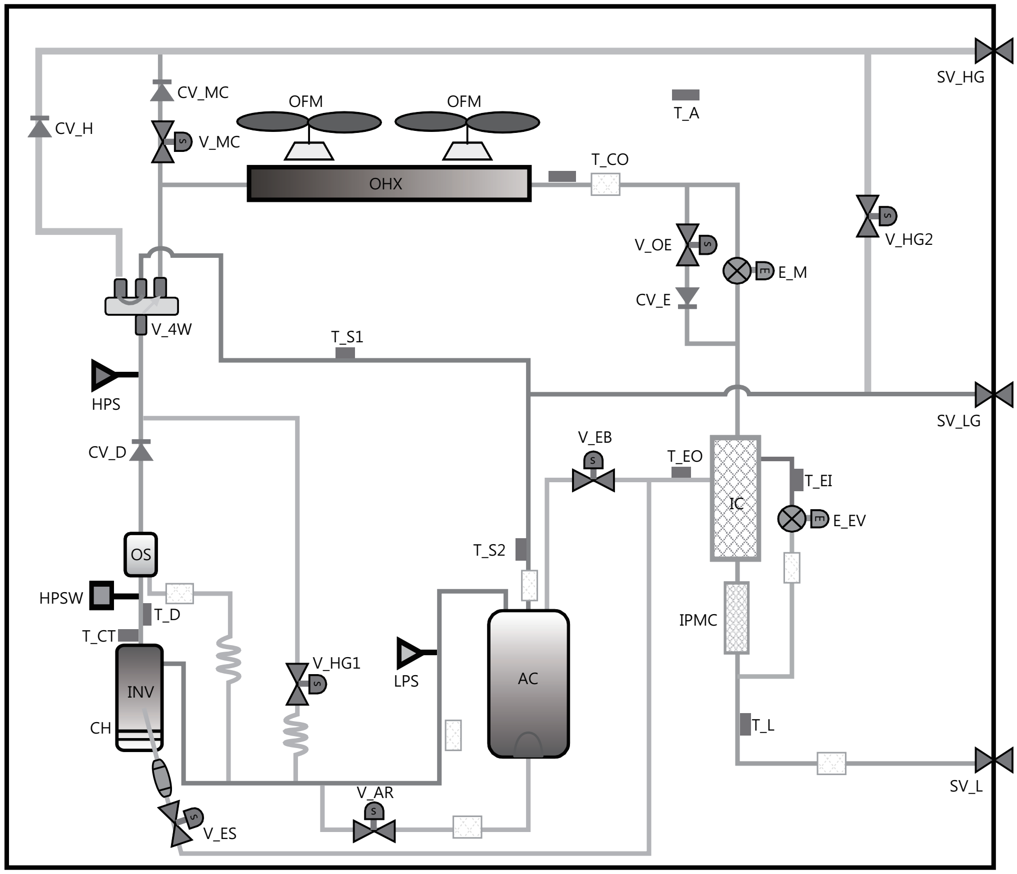
Figure 22. 4TVR0072B300NB, 4TVR0072B400NB



Classification	Description
INV	Inverter Compressor
OFM	Outdoor Fan Motor
OHX	Outdoor Heat Exchanger
AC	Accumulator
OS	Oil Separator
IC	Intercooler
IPMC	IPM Cooler
CH	Crank Case Heater
HPS	High Pressure Sensor
LPS	Low Pressure Sensor
HPSW	High Pressure Switch
E_M	Main EEV
E_EV	EVI EEV
V_ES	EVI Solenoid Valve
V_EB	EVI Bypass Valve

Classification	Description
V_HG	Hot Gas Bypass Valve
V_4W	4way Valve
V_AR	Accumulator Oil Return Valve
CV_E	EEV Bypass Check Valve
CV_D	Discharge Check Valve
T_D	Discharge Temperature Sensor
T_S	Suction Temperature Sensor
T_CO	Condenser Out Temperature Sensor
T_EI	EVI In Temperature Sensor
T_EO	EVI Out Temperature Sensor
T_L	Liquid Tube Temperature Sensor
T_CT	Compressor Top Temperature Sensor
T_A	Ambient Temperature Sensor
SV_G	Gas Pipe Service Valve
SV_L	Liquid Pipe Service Valve

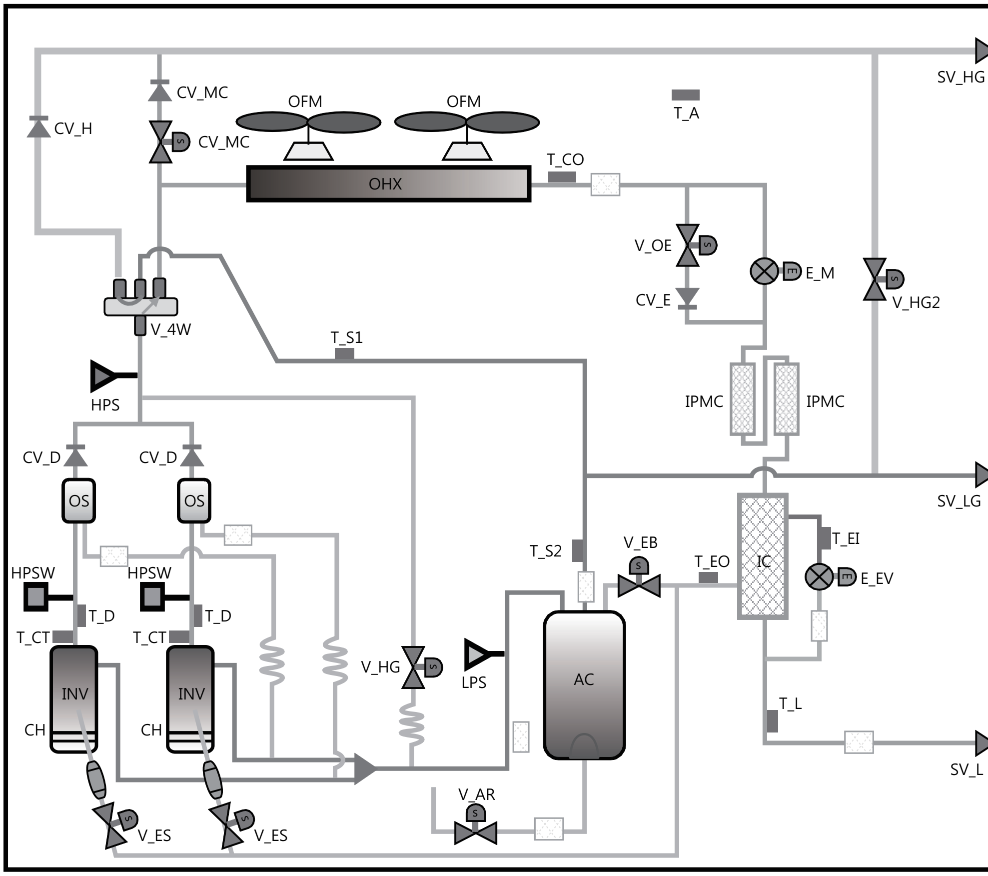
Figure 23. 4TVR0096B400NB, 4TVR0120B400NB



Classification	Description
INV	Inverter Compressor
OFM	Outdoor Fan Motor
OHX	Outdoor Heat Exchanger
AC	Accumulator
OS	Oil Separator
IC	Intercooler
IPMC	IPM Cooler
CH	Crank Case Heater
HPS	High Pressure Sensor
LPS	Low Pressure Sensor
HPSW	High Pressure Switch
E_M	Main EEV
E_EV	EVI EEV
V_ES	EVI Solenoid Valve
V_EB	EVI Bypass Valve

Classification	Description
V_HG	Hot Gas Bypass Valve
V_4W	4way Valve
V_AR	Accumulator Oil Return Valve
CV_E	EEV Bypass Check Valve
CV_D	Discharge Check Valve
T_D	Discharge Temperature Sensor
T_S	Suction Temperature Sensor
T_CO	Condenser Out Temperature Sensor
T_EI	EVI In Temperature Sensor
T_EO	EVI Out Temperature Sensor
T_L	Liquid Tube Temperature Sensor
T_CT	Compressor Top Temperature Sensor
T_A	Ambient Temperature Sensor
SV_G	Gas Pipe Service Valve
SV_L	Liquid Pipe Service Valve

Figure 24. 4TVR0096B300NB, 4TVR0120B300NB, 4TVR0144B300NB, 4TVR0144B400NB



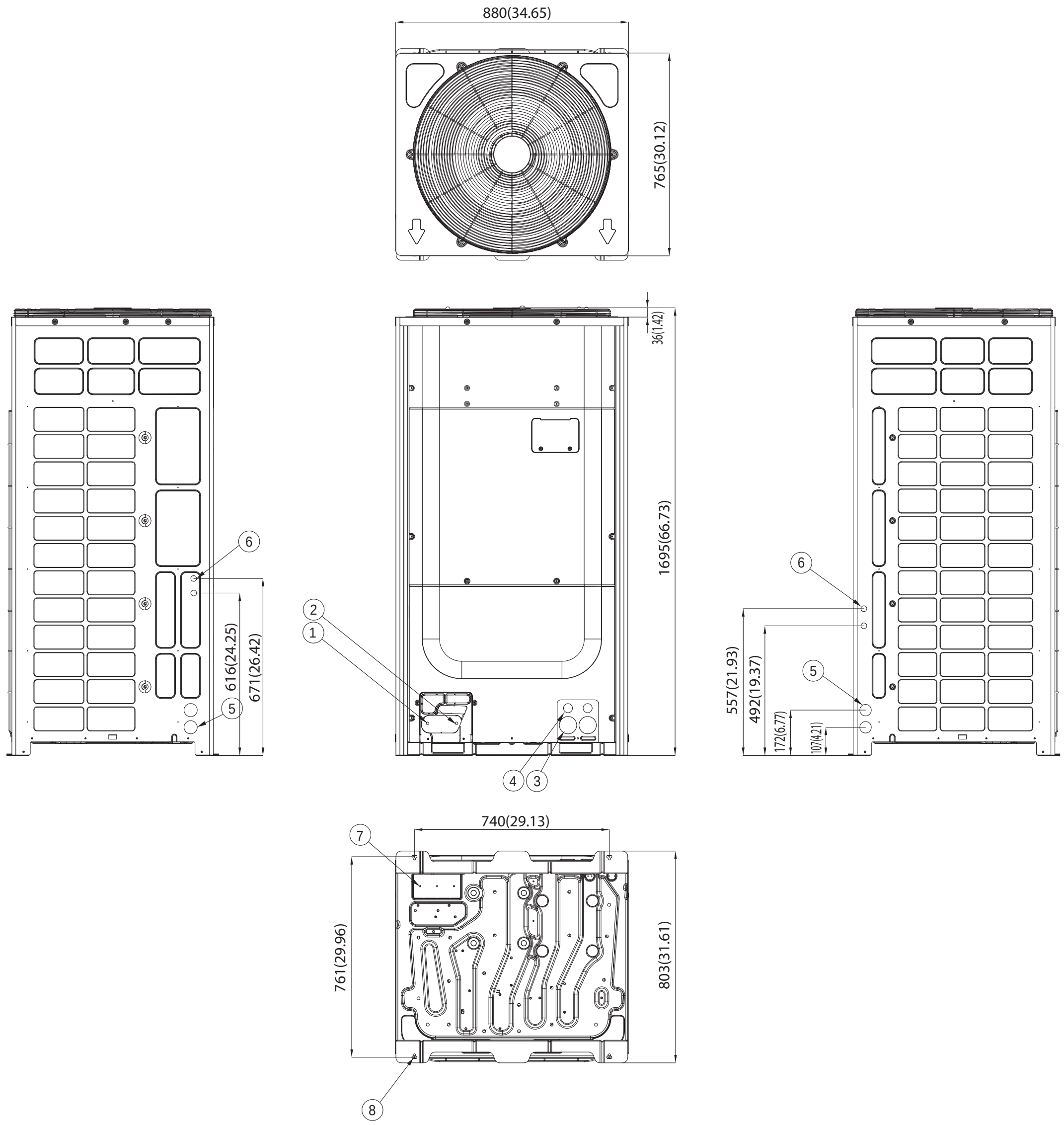
Classification	Description
INV	Inverter Compressor
OFM	Outdoor Fan Motor
OHX	Outdoor Heat Exchanger
AC	Accumulator
OS	Oil Separator
IC	Intercooler
IPMC	IPM Cooler
CH	Crank Case Heater
HPS	High Pressure Sensor
LPS	Low Pressure Sensor
HPSW	High Pressure Switch
E_M	Main EEV
E_EV	EVI EEV
V_ES	EVI Solenoid Valve
V_EB	EVI Bypass Valve

Classification	Description
V_HG	Hot Gas Bypass Valve
V_4W	4way Valve
V_AR	Accumulator Oil Return Valve
CV_E	EEV Bypass Check Valve
CV_D	Discharge Check Valve
T_D	Discharge Temperature Sensor
T_S	Suction Temperature Sensor
T_CO	Condenser Out Temperature Sensor
T_EI	EVI In Temperature Sensor
T_EO	EVI Out Temperature Sensor
T_L	Liquid Tube Temperature Sensor
T_CT	Compressor Top Temperature Sensor
T_A	Ambient Temperature Sensor
SV_G	Gas Pipe Service Valve
SV_L	Liquid Pipe Service Valve

Dimensional Drawings

Heat Pump/Heat Recovery

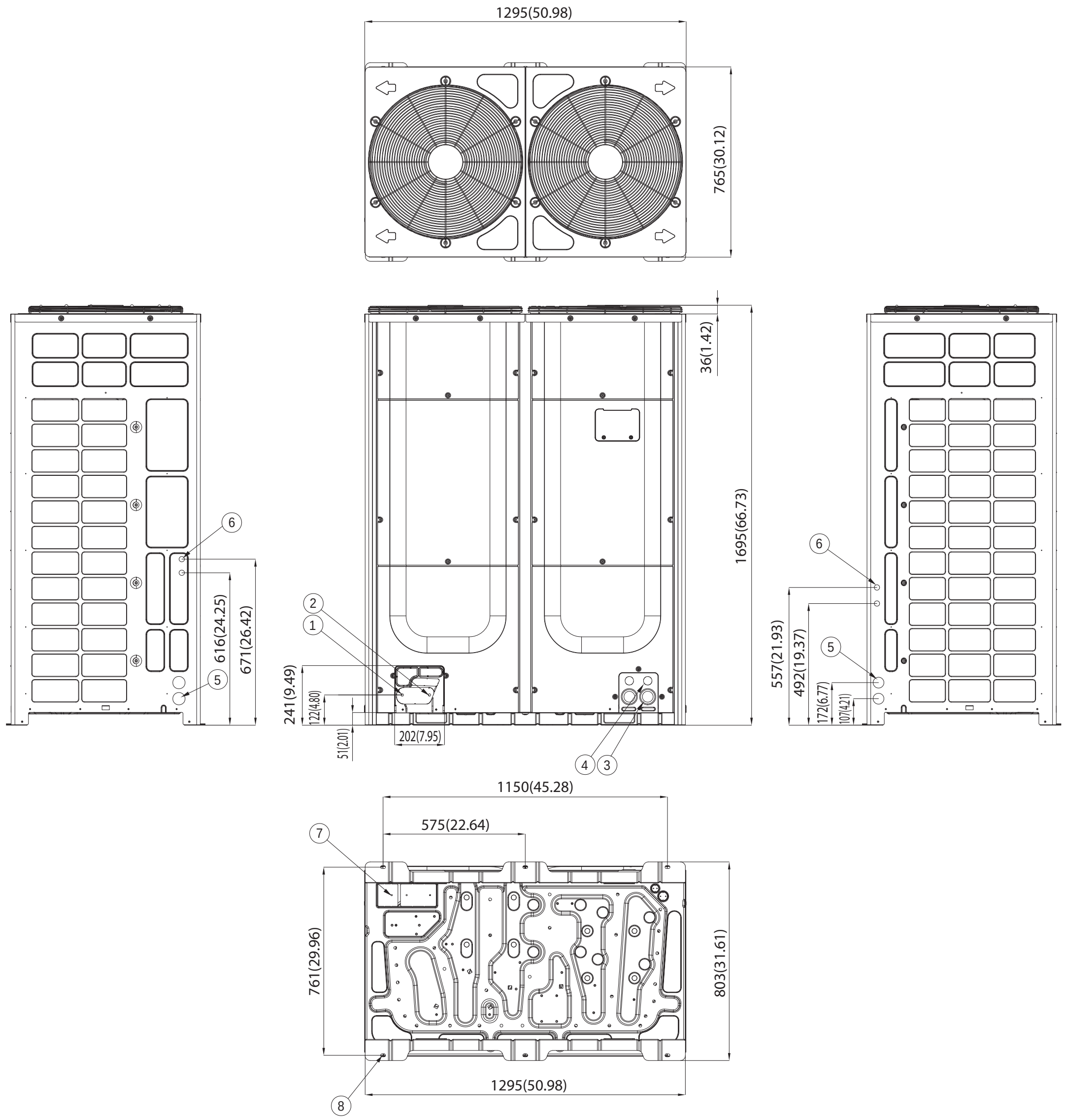
Figure 25. 4TVH/R0072B*****[a]



(a) Unit: mm (inch)

No.	Name	Description	No.	Name	Description
1	Gas Ref. Pipe	-	5	Power Wiring Conduit	4(0.16") - Ø43.7(1.72")
2	Liquid Ref. Pipe	-	6	Communication Wiring Conduit	8(0.31") - Ø22.0(0.87")
3	Power Wiring Conduit	2(0.08") - Ø43.7(1.72")	7	Knock-out Hole for Ref. Piping	178 x 76(7" x 3")
4	Communication Wiring Conduit	2(0.08") - Ø34.5(1.36")	8	Anchor Bolt Hole	4(0.16") - Ø12(0.47")

Figure 26. 4TVH/R0096B***, 4TVH/R120B*****, 4TVH/R0144B*****[(a)]**



(a) Unit: mm (inch)

No.	Name	Description	No.	Name	Description
1	Gas Ref. Pipe	-	5	Power Wiring Conduit	4(0.16") - Ø43.7(1.72")
2	Liquid Ref. Pipe	-	6	Communication Wiring Conduit	8(0.31") - Ø22.0(0.87")
3	Power Wiring Conduit	2(0.08") - Ø43.7(1.72")	7	Knock-out Hole for Ref. Piping	178 x 76(7" x 3")
4	Communication Wiring Conduit	2(0.08") - Ø34.5(1.36")	8	Anchor Bolt Hole	4(0.16") - Ø12(0.47")

Trane optimizes the performance of homes and buildings around the world. A business of Ingersoll Rand, the leader in creating and sustaining safe, comfortable and energy efficient environments, Trane offers a broad portfolio of advanced controls and HVAC systems, comprehensive building services, and parts. For more information, visit www.Trane.com.

Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.

© 2015 Trane All rights reserved
VRF-PRC008B-EN 17 Feb 2015
Supersedes VRF-PRC008-EN (31 July 2013)

We are committed to using environmentally conscious print practices that reduce waste.